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Focal Infection and Phlebitis

By OTTO MEYER, M.D., *New York City*

THE PRESENT conception of focal infection as an etiological factor in systemic diseases is largely due to Frank Billings.

We speak of focal infection if, from an infected focus within the body, bacteria or bacterial toxins enter the bloodstream continuously or periodically and cause symptoms of disease somewhere else in the body. We do not find bacteria in the blood of patients suffering from focal infection. Many authors believe that bacterial toxins play the most important role in focal infection.

Klinge (1) points out the importance of bacterial toxins in focal infection. He considers rheumatism as a hyperergic reaction of the connective tissue (mesenchym) to bacterial toxins in a sensitized body.

In relatively few cases, can we remove focal infection just by eradicating the primary foci in the oral cavity (teeth and tonsils).

Several Foci

The occurrence of more than one focus in the body is much more frequent than is generally suspected. For it is frequently overlooked, that once a focus has been established, the infection has a tendency to spread, first to the surrounding tissue by continuity, and second to parts of the body distant from the original seat of the infection by way of the bloodstream. In the bloodstream, those parts which are especially exposed to congestion, as for instance the veins of the legs, are susceptible to infection more than other regions.

A deciding factor in focal infection is the affinity of bacteria to the veins. Bingold (2) stresses the fact that all bacteria except the coli bacilli have an affinity for the veins. The author (3) was the first to stress the spreading mechanism of oral focal infection through the veins pointing out the secondary infection in the jugular veins.

The pathologists Dietrich (4) and Siegmund (5) showed in histological examinations the tendency of *acute* tonsillogenic and dentogenic infections to spread by way of the small connecting veins into the jugular vein. One must conclude from their work that chronic infections have the same spreading mechanism.

In a paper on the etiology of Endangiitis obliterans for the Swiss Medical Journal, the author (6) has originated the term phlebotropism to express the affinity of the germs for the veins.

The importance of phlebotropism can be easily illustrated in acute rheumatic fever, so far one of the most puzzling diseases.

Acute Rheumatic Fever

The patient is treated with local medication of the tonsils. Generally, the acute inflammation of the tonsils soon subsides under this treatment. Acute rheumatic fever is preceded in most cases by acute or subacute tonsillitis. Within one to three weeks the patient suddenly develops—like lighting out of a blue sky—the symptoms of acute rheumatic fever. The first focus was in the tonsils and was apparently healed. In the meantime the infection has spread from the tonsil area through the small connecting veins to the jugular vein and has formed here a secondary independent focus. This secondary focus now becomes the chief morbid center. Klinge (1) believes that in the interval between

acute tonsillitis and the outbreak of acute rheumatism the body has become sensitized by the repeated absorption of bacteria and their toxins. If this secondary focus is removed immediately, the symptoms of acute rheumatic fever often disappear in a few days. A serious complication of acute rheumatic fever, chorea (St. Vitus dance), responds in the same favorable manner to the removal of the infection in the jugular veins. The explanation is simple. In jugular phlebitis, we find an inflammatory swelling of the inner lining of the jugular vein which narrows the width of the vein canal. The narrowing of the vein canal interferes with the drainage of the venous blood from the head region and causes a venous congestion in this area including the brain tissue. As chorea is a symptom of meningoencephalitis we can easily understand how jugular phlebitis can cause St. Vitus dance. In any tissue with a venous congestion the resistance toward bacteria and bacterial toxins is diminished. If we remove this congestion, the basis for the action of toxins which originate in the inflamed jugular veins disappears. The author saw a complete cure in many cases of chorea within a few days after removal of the infection in the jugular veins.

It is almost unbelievable how the subject of phlebitis has been entirely neglected by modern medicine. The explanation can be found in the fact that most cases of phlebitis are concealed (latent). The author was the first to discover these concealed foci of infection within the venous system. In more than fifty medical papers, he has called attention to the importance of latent phlebitis as an infectious focus. Dietrich states in his modern textbook "General Pathology" that phlebitis and thrombophlebitis are the basis of sepsis. Since many authors consider focal infection as a mitigated sepsis (Hunter's Oral Sepsis), the importance of phlebitis in the focal infection theory should be evident. The author has found in his experience that concealed infections in the veins, and not diseased teeth and tonsils, are the most prevalent focal infections and therefore the most frequent cause of focal infections.

The diagnosis of latent phlebitis is made positive without difficulties by examination of the veins of the legs and of the jugular veins by means of deep palpation. They are sensitive to pressure and are often infiltrated. The jugular veins are easily accessible to the exploring finger. When inflamed, they are sensitive to pressure. Latent phlebitis of the legs can be diagnosed by making use of "Meyer's Pressure Points" (see Fig. 1.) which the author has described in several publications. Several authors like Leibholz, Bottenberg, C. L. Schmidt, P. Koehler, Henschen and others have confirmed the 'pressure points' in literature.

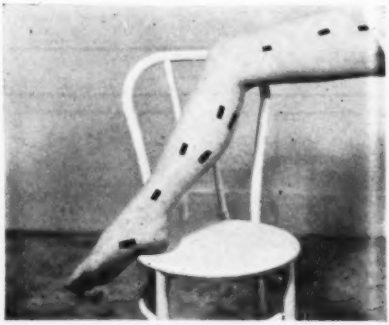

Fig. 1. Meyer's pressure points for phlebitis. (The plantar vein point was described by Payr.)

It was the genius of the great French pathologist Cruveilhier (1791-1874), the first occupant of the newly established chair of pathology at the University of Paris, who called attention to the importance of phlebitis. He said verbatim in his famous atlas, Anatomie Pathologique: "I cannot repeat it often enough: phlebitis dominates all pathology." He explained his point of view as follows: "Phlebitis is an inflammation like all other inflammations but it has one special feature that makes it most important: It infects the bloodstream."

When Cruveilhier published his atlas in 1842, microbes were not yet known. The word infection (from the Latin word *inficere*, to put in, to taint) had at that time the meaning of contamination, pollution. Consequently, he meant to say that phlebitis pollutes the bloodstream.

When we realize that in phlebitis, being an infection of a comparatively large portion of one or more blood vessels, the infection is located in the inner wall of the vein that is in constant, intimate contact with the bloodstream, we can easily understand that the poisonous products of the microbes (toxins) enter the bloodstream and are carried to organs or parts of the body that are weak in resistance to these bacterial toxins. Some organs in the body have an inherited weak resistance, while tissues of other organs may have become weak through injuries, former diseases or

operations.

The blood produced in the human body is normally healthy, but as soon as the blood is carried through infected veins it becomes "infected" (contaminated) with toxins. The result is a phlebogenic toxinemia; in other words, a poisoning of the blood with toxins which originated in the inner wall of infected veins. Laymen understand this process very well when we explain to them that beer of the best quality will be spoiled when it is pumped through dirty pipe lines. Very few realize the enormous quantity of blood vessels we have in our system. Professor August Krogh of the University of Copenhagen, who was awarded the Nobel prize for medicine in 1920, states: "The small bloodvessels of the muscles alone total about 62,000 miles, which suggests that the circulatory system of the entire body may comprise more than 100,000 miles of living plumbing."

When we realize how easily the human plumbing system gets contaminated by toxin producing lesions within the inner wall of the veins, we see how important it is for our health to purify the blood from toxins by removing these foci within the walls of our veins.

Regarding the chemical nature of toxins, less is known than regarding their physiologic action. In spite of an enormous amount of work on the subject, no important bacterial toxin has as yet been obtained in a pure condition. Many of them seem to be of proteid nature such as toxalbumoses.

Since the exact chemical nature of toxins is not known, we cannot expect them to show up in bloodtest. The lack of objective findings in toxinemia explains perhaps the lack of interest in this condition. Modern medicine seems to ignore everything that cannot be detected objectively by chemical or physical methods. We physicians apparently must learn from the legal professions the importance of circumstantial evidence. The great clinician, His, once said: "Science is not an accumulation of facts, but a logical coordination of facts.'

R. Doerr (8) of the University of Basel, one of the greatest living bacteriologists, explains the role of bacterial toxins in the following manner: "The production of the symptoms of infectious diseases is quite generally explained by the action of toxins, also in those cases in which we do not know the toxins or in which they cannot be proven by any test to be present. For, there is no other conception which would explain the severe general symptoms which are definitely disproportionate to the number and volume of the infectious germs, and which would furnish an explanation for the fact that disturbances occur in organs in which the microbes are not present at all (distant action)."

Robert Muir, professor of pathology at Glasgow, co-author of the "Manual of Bacteriology" describes the effect of toxins in the following manner: "The changes produced at a distance by distribution of toxins may be manifold—cloudy swelling and fatty degeneration, serous effusions, capillary hemorrhages, various degenerations of muscle, hyaline degeneration of small bloodvessels and, in certain chronic diseases, waxy degeneration, all of which may be widespread, are examples of the effects of toxins, rapid or slow in action."

The presence of a localized focus of infection is a most important activator of bacterial allergy. The constant absorption of the toxins sensitizes the body. The result is hyperergic inflammation in distant parts of the body, remote from the infectious lesion. The conception of focal infection as a bacterial allergy stresses not so much the kind of microbes as the reaction of the body to the infection.

The repeated absorption of toxins seems to be the deciding factor in focal infections.

We come to the conclusion that focal infection is primarily a toxinemia; in other words, a poisoning of the blood with toxins which may cause acute or chronic diseases. In such cases, the toxins are poured into the bloodstream and carried to an organ which they attack. For example, the toxins may be formed in the jugular vein (focus) and may attack the knee joint. Then the jugular vein infection is the toxin factory that is the *point of production* of the toxins, the knee joint is the *point of attack* of the toxins. The bloodstream is the *conveyor belt of the toxins* between the focal infection (point of production) and the attacked organ (point of attack).

From a clinical point of view, it is unimportant if we consider the dynamic of focal infection as the direct attack of the toxins, as an intensified effect of toxins due to bacterial allergy, or as a mitigated sepsis.

The problem of focal infection resolves itself to finding and eradicating *all* causative foci in the body. We must remove the primary foci in the oral cavity and all foci in the vein system, especially in the jugular veins and the deep veins of the leg.

In treating phlebitis of the legs, I am

using a modification of Fischer's compression bandages.

Since focal infection is essentially a problem of phlebogenic toxinemia, the complete removal of infectious foci in the walls of the veins is of the greatest importance. The physician must take the utmost care in eradicating these infectious foci within the blood vessels. The result is the purification of the blood from bacterial toxins.

Our health depends on healthy blood in healthy blood vessels. Healthy blood is the best disinfectant of the human body and is the deciding factor in the fight of the body against invading bacteria. Physicians in the future will say: You are as healthy as your veins.

200 W. 54th Street

Bibliography

1) Fritz Klinge: Der Rheumatismus. Bergman, 1933
2) Konrad Bingold: Die septischen Erkrankungen. Urban & Schwarzenberg, 1937
3) Otto Meyer: Latent Phlebitis as a cause of Rheumatism. *Rheumatism*-Journal (London), January 1939
4) A. Dietrich: Die Ausbreitungswe'se der tonsillogenen Sepsis. *Zeitschr. f. Laryngol. Rhinol.* 23 H. ¾
5) Herbert Siegmund: Ueber die akute Entzuendung der Halsvenen bei odontogenen Kiefererkrankungen. *Deutsche Zahnheilfunde* 74 S.56/61
6) Otto Meyer: Zur Aetiologie der Endangiitis obliterans. *Schweizerische Mediz. Wochenschrift* No. 18, 1943
7) Otto Meyer: Numerous papers on phlebitis and its complications. See Index Medicus of the A.M.A.
8) R. Doerr: Pathogenese der klinischen Erscheinungen in Bergmann, Lehrbuch der Inneren Medizin, Julius Springer, 1931

The Emotional Factor in Peptic Ulcer*

By H. LEONARD BOLEN, M.D., *Fall River, Mass.*

THE ETIOLOGY of peptic ulcer has become a perennial problem. The gastrointestinal system is closely bound up with the autonomic nervous system, and symptoms of ulcer follow directly upon specific emotional disturbances. Nature made the antrum of the stomach like a funnel, tapering to a narrow orifice, the pylorus, which opens and closes intermittently, thus maintaining the proper titer of hydrochloric acid during the function of digestion. By this self-regulating mechanism, in healthy individuals the freshly-secreted gastric juice of 0.5 per cent is reduced by pancreatic juice to 0.2 per cent. If the pylorus fails to open properly, the gastric acidity remains too high. A prime cause might therefore be found in the mechanism governing and regulating the output of hydrochloric acid.

Two parts of the nervous system are involved in the function of digestion:

1. The vegetative-reflex (peripheral nerves).

2. The cerebral centers and the vagi. These normally play only a small part in the process of digestion, but under the stress of violent emotion, they transmit stimuli to the stomach by way of the tenth nerve. If the action of the vagus is deficient, the result is atony of the stomach. If the action is excessive, there is increased peristalsis, spasm, and hypersecretion. In our modern world of economic and financial cares, the stage is set for functional disorders.

Carefully taken histories reveal in many ulcer patients an absence of periodicity of symptoms except in relation to the emotional strain involved, and ulcer symptoms disappear when the latter is removed. It must be admitted that there is a definite "ulcer type" of patient. These patients are hyperkinetic, active by spurts, with limited powers of endurance, are easily excited, worry a lot, and need frequent rest periods. The relation of mental strain and anxiety in the development of peptic ulcer is apparent from the case histories. Removal of the source of worry affords relief in these patients; anxiety and tension delay healing of the ulcer.

The following study reports observations in private practice and outpatient department (local hospital).

Two groups of patients were examined. First, gastric analyses with fasting stomach were made in 40 patients with chronic peptic ulcer of long duration. These findings were compared with gastric analyses in another series of 40

*Author's Adaptation of article published in *Review Gastroenterology*. July-August, 1943.

patients of the nervous type with ulcer symptoms which disappeared after the emotional factor in each case had been discovered and eradicated. The free and total acidity was determined in the usual clinical manner with Töpfer's solution and phenolphthalein indicators. Instead of measuring the acid which was secreted in response to a stimulus, it was considered more satisfactory to examine the contents of the fasting stomach. The total gastric juice was collected over successive fifteen-minute periods for one hour. These patients were given no food for twelve hours and no water for at least two hours before the test was made.

A range of 20-40 degrees of free hydrochloric acid was considered normal, 40-60 degrees moderately high, and more than 60 degrees markedly high. It was noted that the amount of free hydrochloric acid was lower in those stomachs which contained considerable mucus. All of these patients were studied when they were presenting symptoms and signs of peptic ulcer, and in every instance there was definite x-ray evidence to support the diagnosis of ulcer.

In the cases in Table I, it was not possible to elicit histories of emotional factors which might account for symptoms. These patients were kept on a strict modified Sippy diet; any deviation from this regime produced recurrence of symptoms.

The syndrome described by patients in Table II was the same as that found in the first group. But careful questioning revealed that the symptoms bore a direct relationship to emotional strain and mental stress. Upon removal of the specific emotional disturbance, symptoms disappeared. There was also a definite decrease in free HCl and in total acidity.

Although the number of cases in each group is small, the conclusion is obvious that the gastrointestinal system is closely bound up with the autonomic nervous system and the mental field. The majority of patients in Group II admitted that fear of not being able to take care of themselves and their families brought about the condition. In this group, the seasonal attacks in the spring and fall were not mentioned; the condition was constant as long as the patient worried. In this connection, it is interesting to note that at the clinic during the depression, from 40 to 50 persons a week were seen presenting symptoms and signs of peptic ulcer. In 1942, however, the number of outpatients with the ulcer syndrome dropped to about 5 a week, as most individuals in this category were able to find lucrative employment.

It is suggested that more attention be directed to the psychological aspects of ulcer in mapping out a course of treatment—to institute treatment early and whenever possible remove the factor of emotional strain.

1524 S. Main St.

TABLE I

Gastric Analysis (Fasting Stomach) in Patients with Chronic Peptic Ulcer of Long Duration

No. of cases	Sex	Age	Type of ulcer	Free HCl	Total acidity
40	Male 38 Female 2	15-45	Gastric 5 Duodenal 35	35°-45°	68°-81°

TABLE II

Gastric Analysis (Fasting Stomach) in Ulcer Patients with Symptoms due to Emotional Strain

No. of cases	Sex	Age	Type of ulcer	Free HCl	Total acidity
40	Male 36 Female 4	28-42	Gastric 3 Duodenal 37	28°-41°	49°-70°
After removal of emotional strain				22°-34°	39°-52°
Epigastric pain				2 to 4 weeks	
Pain at night				2 weeks	
Nausea				1 week	
Vomiting				1 week	

Selection and Use of the Sulfonamides*

By W. A. MERRITT, M.D.† *Mayo Clinic, Rochester, Minn.*

Selection of Drug

THERE are many factors that must be considered in selecting the proper sulfonamide for a particular condition.

Table I indicates the pharmacologic properties of the various sulfonamides.

Sulfapyridine is used in those central nervous system infections, such as meningitis, where sulfadiazine is not as effective.

Sulfathiazole is excreted rapidly, so must be administered at frequent intervals. It is the most effective sulfonamide against staphylococcic infections.

Sulfadiazine is slowly excreted, so smaller doses can be used. Genito-urinary complications, such as oliguria and anuria and stone formation, are much less frequent than with sulfathiazole or sulfapyridine. It diffuses through all tissues and is effective against many central nervous system lesions. It is the least toxic of the sulfonamides. It is polyvalent, that is, effective against several bacteria: streptococci, pneumococci, staphylococci and others.

Sulfaguanidine is used in local treatment of intestinal infections especially the dysenteries. It is of very low toxicity. Clinical studies are being carried on in the treatment of typhoid fever.

Succinylsulfathiazole may be of value in the treatment of ulcerative colitis.

Acute brucellosis, actinomycosis and bacteroides infections *may* respond to treatment with sulfadiazine or sulfanilamide.

No benefit or harm may result from sulfonamide treatment of infectious arthritis, rheumatic fever (this does not refer to the prevention of streptococcic infections by use of small doses of sulfanilamide), colds, virus infections and tularemia.

Sulfadiazine is the most effective prophylactic against gonorrhea.

Local Use of Sulfonamides

Sulfathiazole is effective against more organisms, stimulates natural defense mechanisms better and has a longer action, so its use is preferred locally, in doses of 5 to 10 Gm. Sulfanilamide is innocuous to peritoneum and is preferred for peritoneal implantation in doses of 5 to 10 Gm. Crystalline, *not* powdered, sulfadiazine and sulfanilamide are used. They should be spread out, so no foreign body reaction occurs.

	Methods of Administration
Oral	Best method
Subcutaneous	0.3 to 0.7% solution Sulfadizine sodium best Sulfathiazole sodium next best
Intravenous	5% in normal saline solution or in 5% dextrose (glucose) solution, if rapid concentration desired or patient vomiting.

Dosage

In mild infections, such as pyuria and gonorrhea, give 7.7 gr. four times daily. 3,000 cc. (3 quarts) of liquid must be given daily to prevent kidney complications.

In serious infections, such as meningitis, give a large dose to rapidly build up a high blood concentration and continue with smaller doses for a long time. Small doses are given for 3 weeks after apparent recovery. *Don't wait for laboratory tests before beginning sulfadiazine administration.*

Poor Results

Poor results occur when a focus of infection is not removed or drained, as shown by autopsy studies in cases of endocarditis, mastoid or petrositis infections, brain abscess or thrombophlebitis.

Toxicity

Nausea and emesis are not indications for stopping sulfonamide therapy.

Drug fever or skin eruption may persist as long as 3 days after the sulfonamide is stopped. A secondary rise in fever is often due to the drug.

Oliguria is a serious sign. Sulfonamides should be stopped, if elective diseases are being treated. If a potentially fatal condition, such as meningitis, is being treated, continue the sulfonamide therapy and force fluids orally and intravenously.

Every patient taking sulfonamides must urinate at least 1,000 cc. daily. Sodium bicarbonate should be given in doses of 10 to 16 Gm. daily as the sulfonamides are more soluble in alkaline urine (and less likely to form stones or crystals). The pH of the urine should

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†Now in the Armed Forces.

TABLE I.

PHARMACOLOGIC PROPERTIES OF THE SULFONAMIDE DRUGS

Influencing Factors	Azosulfamide (neoprontosil)	Sulfanilamide	Sulfapyridine	Sulfathiazole	Sulfadiazine	Sulfaguanidine
Solubility in water at room temperature	5 per cent	1 per cent	0.03 per cent	0.1 per cent	0.01 per cent	0.2 per cent
Absorption	Good	Good	Fair (irregular)	Good	Good	Poor
Excretion	Good	Good	Good	Good (?) (rapid)	Good (slow)	Good
Acetylation	Slight	Slight (10-15 per cent)	Great (15-75 per cent)*	Slight (0-30 per cent)*	Slight (compound soluble)	Moderate
Diffusion (fluid and tissue)	Good	Good	Good	Fair (poor into cerebrospinal fluid)	Good	Fair (poor into cerebrospinal fluid)
Toxicity	Mild	Moderate	Moderate (+)	Moderate (−) to low	Mild	Mild
Bacteriostatic effect	Monovalent; hemolytic streptococci		Polyvalent, hemolytic streptococci, pneumococci, staphylococci			Intestinal bacterial infections

*Compound insoluble.

be kept over 7; this may be easily checked with litmus paper. Blood levels of the drug should be checked.

Hemolytic anemia may appear during the first week, so red blood cell counts should be done several times during that week. White blood counts should be performed during the second week and later, as agranulocytosis occurs during that period.

Albuminuria and crystals in the urine, headaches and confusion precede serious complications.

The vomiting patient should receive saline solution intravenously. Patients with severe infections should receive small blood transfusions (250 cc.) every other day.

Sulfonamide Failures

The sulfonamide failures may be due to (a) resistant organisms, (b) sulfonamide therapy was begun too late or (c) surgical foci of infection or bacterial endocarditis are present. Some staphylococci develop p-Amino-Benzoic acid and become much more resistant.

Sulfamerizine

Sulfamerizine is a new product not yet commercially available. It is not toxic to the kidneys. It is more completely and rapidly absorbed and excreted more slowly than sulfadiazine, and is more soluble in the urine. It diffuses in all the body tissues. Smaller doses are needed to maintain an effective blood level. 1 Gm. (15 gr.) four times daily will often result in 13 mg. per 100 cc. of blood.

Penicillin

Pencillin:
Obtained from yeast mould—Systematic Use

Gramicidin:
Obtained from soil bacteria—Local Use only because of toxicity

Penicillin has low tissue cell toxicity and is highly bacteriostatic. It cannot be synthesized, and its production from yeast mould is slow, difficult and uncertain.

It is very soluble, unstable, and cannot be used in the stomach due to the destructive action of the hydrochloric acid but may be used by means of a duodenal tube. It diffuses rapidly into the tissues from the blood so is best given by constant intravenous drip. It may be administered locally or subcutaneously without danger. For intravenous use,

pyrogen-free (fever free) penicillin must be employed.

It is an effective antibacterial agent in severe infections due to Staphyloccocus aureus, Streptococcus pyogenes, susceptible strains of Diplococcus pneumoniae, Neisseria gonorrhea and Neisseria intracellularis.

Penicillin is not related to any of the chemotherapeutic substances now being employed, it is nonhemolytic, and is not inhibited by products of tissue destruction (as are the sulfonamides) or para-aminobenzoic acid. It is ineffective against the green-producing streptococci and tubercle bacillus. It may be of value in actinomycosis. Leukocyte counts rise during penicillin therapy of severe infections with leukopenia.

[Sulfamerazins mentioned by Dr. Merritt is now available commercially, as it is manufactured by Sharp & Dohme, Inc., Philadelphia, Pa.—Ed.]

Management of Burns and Their Complications

By JOSEPH C. URKOV, M.D., *Chicago, Illinois*

IT IS MY PLAN to outline a form of treatment of burns with a view toward the end result, rather than the immediate result, i. e. The prevention of unsightly disfigurements, anatomical and functional distortions, serious or fatal escape of tissue fluids, toxemia and a prolonged hospitalization period.

Blair-Smith and Padgett have for their basic law, a view toward coverage of severe burns with skin grafts and their treatment with this end in view is outlined from the very inception of the burn. Therefore, the management of the burn is a precursor to the form of therapy instituted. This treatment reduces the mortality, reduces the time element of recovery from one to two years to approximately two to three months.

Burns are, usually, classified as first, second, and third degree. A first degree burn is Erythema. A second degree burn is vesicle formation, and third degree, charing, the temperature 210 degrees or more.

A 1st degree Erythema burn is, usually, accompanied by edema without blisters. A 2nd degree burn destroys the epidermis and the surface corium. Blisters are present. A 3rd degree burn extends through the entire skin and frequently affects the tissues beneath, and oft-times charring of the fascia, muscles, bone or cartilage.

A 1st degree burn that involves two-thirds of the body area; a second degree burn that involves one-half of the body area; a third degree burn involving one-third of the body area may prove fatal. Of course, with an infant, a third degree burn involving as little as one-tenth or one-twelfth of the body area may prove fatal. Burns of the abdomen have the highest mortality because of their dangerous proximity to the viscera. Burns of the flexor surfaces are serious because of the danger of permanent disfiguring contractures.

There are several important factors to be remembered when dealing with a severe burn: 1—Relief of shock. 2—Relief of pain. 3—Replacement of tissue fluid; also, it tends to prevent wound toxic absorption and loss of body heat. 5—Limiting of scar deformity.

Locally, the burn is treated with a coagulum, sprayed with sulfanilamide powder or sulphanamide incorporated in an oil vehicle, moist saline or boric acid dressings, various dye substances, firm bandaging, or plaster of paris encasement.

A protective coagulum has several distinct advantages. It limits the escape of tissue fluids, acts as a barrier to infection and prevents further loss of body heat. The type of coagulum will depend upon the seriousness of the loss of tissue fluid and body heat.

Tannic Acid

The advantages of tannic acid are simplicity of application and the relief of burning sensation—usually within one-half hour. The coagulum prevents toxic absorption and further loss of tissue fluid; also, it tends to prevent wound infection and loss of body heat; lastly, scar formation seems less marked under this form of treatment.

There are several drawbacks to the use of tannic that should be considered. In the first place, in the case of superficial burns, it may destroy the remaining germinative epithelium, sebacious

glands and follicles which might, otherwise, have survived to stimulate repair.

The coagulum is opaque and so early infection underneath is often overlooked. In deep burns, the coagulum has a tendency to adhere and may require surgical removal and, since it is inflexible, it has a tendency to crack on movement and expose the area to infection.

If tannic acid is used, it must be applied within the first few hours after the infliction of the burn. If more than 24 hours have elapsed, the area will have passed from the contaminative to the infective stage and to cover the raw surface would be to lock up any underlying infection. A case seen for treatment 24 hours after the burn should have recourse to open drainage by means of warm moist antiseptic dressings.

Gentian Violet

Several authorities advocate the use of Gentian Violet in preference to tannic acid. They advocate its use on the theory that the constitutional symptoms following burns is due to bacterial infection rather than the absorption of proteolytic toxines from the burned tissues. They found that the predominating organism present was the hemolytic streptococci and gentian violet possessed a selective action on this organism.

In addition to forming a coagulum, it has the advantage of possessing germicidal qualities. The crust is thin and more flexible and facilitates detection of underlying infection, but its greatest drawback is that it fails to prevent a loss of tissue fluid, and therefore, should not be used in extensive third degree burns where there is a danger of dehydration from excessive loss of serum.

In order to establish a definite form of treatment for the various types of burns, I would like to take you through a series of cases.

Technic

Wet dressings of saline, magnesium sulphate or boric acid will tend to relieve the *pain of a first degree burn*. Continuous wet gauze dressings are changed twice daily. Use a heavy roller gauze to wrap around the burned area with sufficient cotton on the outside to hold the moisture throughout the day. At intervals of once every hour, additional solution is poured upon the cotton and gauze dressings. Continue the treatment for 48 hours and follow with an ointment dressing, consisting of gauze impregnated with 3% xeraform in vaseline.

Treatment of Second Degree Burns

When dealing with a second degree burn that involves 10 to 25% of the body area, the patient is given supportive treatment and locally the area is carefully cleansed with soap and water. Blisters are opened and the dead epidermis removed.

A coagulum is sprayed on the wound, using a 1% to 2% aqueous solution of gentian violet. The spraying is done at 5 minute intervals for the first hour, at 15 minute intervals for the second hour, and at one-half hourly intervals for 24 hours thereafter. The coagulum is left on for 10 days to 2 weeks. A second degree burn will heal without scars if the burn affects the superficial corium only. A patient with a third degree burn that involves less than 10% of the body area, the tissue fluid loss not serious, and the heat mechanism not noticeably disturbed, the burned area is carefully cleansed and gentian violet treatment is given. The method of application is the same as in the case of a second degree burn.

Two weeks later, the coagulum is washed off and boric acid dressing applied until healthy granulations appear.

Severe Legburns

Let us assume that a patient is brought to the hospital with a severe burn of the lower extremities. If the patient is in a state of shock, he should be treated promptly and energetically. The foot of the bed is raised and the affected area covered with an electric light cradle. Plasma, cardiovascular stimulants of caffeine, and sodium benzoate, coramine, adrenal cortex, morphine and oxygen may be necessary.

When the patient recovers from shock and his heat regulating mechanism is once more functioning, he should be put in a water bath at 100 degrees Fahrenheit. In the bath, the clothing can be cut away. He is now taken to the operating room and placed on sterile sheets and an intravenous pentothal anaesthetic is administered. A complete debridement is done with several scrubbings of green soap or white soap and distilled water for, at least, 10 to 15 minutes. All devitalized tissue is removed.

During the first 6 to 8 hours following the burn, the wound is in a state of contamination and the more thorough the cleansing, the less the danger of absorption of toxic substances from the burned tissue. The debridement is for the purpose of converting the contaminated area into a clean one; otherwise, the burned tissue will furnish an ideal

field for the development of bacteria by providing them with warmth and moisture. Moreover, the coagulating agents which are applied later cannot be depended upon to inhibit this bacterial growth and suppuration will ensue beneath the crust.

Light gauze dressings are placed over the burn and the patient is returned to the hospital bed and the affected area covered with an electric light cradle.

The coagulum treatment is begun with tannic acid. A 2 to 5% of fresh aqueous solution is applied in the form of wet dressings, or as a spray. When the spray is used, the ordinary atomizer sprays the wound every one-half hour until the surface becomes mahogany brown. It takes about 16 to 18 hours to coagulate an extensive burn and 24 hours for complete hardening. During this time, it is important to keep the patient under the electric light cradle to speed up the coagulum and just before complete hardening remember to cross-cut the coagulum with a sterile sharp knife to aid in its future separation. The crust usually separates after 2 or 3 weeks, exposing a clean granulating surface. The burned areas are now kept moist with wet boric acid roller bandages that are changed twice daily and moistened every hour. If the removal of dressings is painful, the patient is placed in a tub of hypertonic saline solution until the dressings can be removed with ease. The treatment is for the purpose of stimulating granulations. Mild dye solutions, magnesium sulphate, or sodium hypochloride solution may be used instead of boric acid.

The stimulating treatment is continued for two weeks and the granulations will appear rose-red or cherry-red. The bacterial count will be low and on the fifth week following the inception of the burn the raw surfaces are ready for complete coverage with free skin grafts.

Early skin grafting will help combat a secondary anemia and eliminate scar contractures.

Severe Third Degree Burn

And now the case of a patient with a severe third degree burn with marked toxemia and suppuration. The management of the first stage (shock), the second stage (debridement), and the third stage (coagulum) is the same, but on the fourth to sixth day one notes a reddening of the peripheral skin and a tenderness beneath the tanned surfaces indicating suppuration below the crust. The cross-cutting of the coagulum, which was done the first day of the treatment, will now make its removal easier, and the burned area is treated as an open infected wound. The treatment consists of daily dressings with a thick roller gauze bandage that is kept saturated with boric acid and is changed twice daily. The frequent changing of the dressings facilitates the carrying away of the necrotic substances and the surface bacteria. It is advisable to make dressing changes when the wound has been submerged for several minutes in a tub of hypertonic solution. As soon as the granulations are cherry red and the bacteria count is low, the exposed surfaces are covered with skin grafts. To wait for the surface to heal in, entails long hospitalization and with scar tissue that is dense and unyielding. Furthermore, there is always the possibility of malignant degeneration in slow healing burn-scarred areas.

Patient in Shock

If a patient is in shock, because of a severe burn that involves 30 to 35% of the body area, responds poorly to shock therapy, and is losing tissue fluids and body heat rapidly, it is necessary to obtain a quick coagulum instead of waiting the usual 16 to 18 hours. The silver tanate treatment is indicated and consists of a liberal spraying of a fresh 5% tannic acid solution and followed with a 10% silver nitrate solution.

A protective coagulum will form almost immediately. The silver tanate treatment will help carry the patient through the critical first 24 hours. If the patient is toxic and is losing ground, becoming generally more debilitated, emaciated, and more anemic and still his condition is such that the transference of enough skin to cover a sufficient area might save the patient's life, it seems to me that this is a justification for the risk of an immediate operative fatality. Such a decision can only be made by balancing all factors of the patient's condition in conjunction with the chances of supporting the patient with blood transfusions both before and after the operation.

I believe that we can draw some worthwhile conclusions from a patient that I was asked to see in consultation with a medical director of an insurance company. A Negro with a severe third degree burn involving the entire lower extremities and the genitalia resulting from the explosion of a blow torch. He was taken to a hospital and following a debridement, a tannic acid coagulum was applied. Twenty-four hours later, the patient was removed, by ambulance to another hospital and the affected areas were placed under an electric

light cradle. Within one week from the time of the accident he developed a marked toxemia. On the eighth day the coagulum started to crack and pus seeped through the cracks. He was taken to the operating room and the coagulum was surgically removed. At this time, he was given 500 c.c. of whole blood. When extensive bleeding from the infected wounds was brought under control, the entire areas were covered with cod liver oil ointment. I saw the patient two months after the time of the accident. His history chart showed a daily temperature of 101 degrees to 104 degrees for 6 weeks. First blood count—6,500,000 and hemoglobin 165%; w.b.c. 25,000. Last blood count, 2,200,000 red and hemoglobin 45%. Five or six morphine injections given daily for restlessness and pain. The patient was in a constant semicomatose state, anemic, dehydrated, starving, and making a fast exodus. Inspection of the wound showed large patches of foul-smelling necrotic tissue and the entire area covered with a greasy cod liver oil substance.

With early and frequent plasma transfusions, measures to combat toxemia and local suppuration, with continuous stimulation of the granulations, reduction of bacteria count, with whole blood transfusions before and after coverage with skin-grafts, this patient might have survived.

I do not hesitate to be uncomplimentary about this and other cases of mismanagement where the form of therapy is changed in desperation every 24 hours to attempt to meet the advancing storm of complications.

Summary

In conclusion, I should like to add that if burns are accepted in the category of wounds, the accidental wounds of the tissues can be given similar supportive and local treatment as recommended for burns. They too should be considered as contaminative for 4 to 8 hours following the accident and the more thorough the debridement the less the danger of infection. Following the debridement, the tissues are covered for protection and healing by first intention. Its covering is skin instead of a chemical film. If approximation of edges is difficult, or impossible, then free undermining of surrounding area may allow for the closure; otherwise, a skin graft is placed over the denuded structure.

A case seen 10 to 24 hours after time of the accident is no longer a contaminated wound, but instead an infected wound and should be treated as such, by complete debridement, control of bleeding, excision of devitalized tissues, supportive measures and the wound covered with frequently changed moist antiseptic dressings until all evidence of infection has passed and then a secondary repair.

Since the invention of the Dermatone by Padgett and Hood, extensive skin grafting can be practiced on bad burns or surface wounds involving the head and neck and extremities. As a Medical officer of the armed forces in the South Pacific war zone, I had frequent opportunity to skin graft large wounds caused by fire and shrapnel. The preoperative preparation as outlined in this article plus early skin grafting reduced the hospitalization time considerably and enabled soldiers to return to full duty in a short while as against long convalescence and evacuation to the States as in the case of World War No. I.

55 E. Washington St.

COMING ARTICLES

Rocky Mountain Spotted Fever.....*By* **G. E. BAKER**, *New York, N.Y.*

Treatment of Chronic Arthritis Forms With Reference to Sulphur.....*By* **A. WEISSMAN**, *New York, N.Y.*

Hypothyroidism (Graduate Course) .....*By Various Authors*

Phenyl-propyl-methamine Hydrochloride for Asthma *By* **K. GLASER**, *Louisville, Ky.*

Critical Diagnosis ..... *By* **W. M. GROFTON**, *London, England*

Notes from the Interstate Postgraduate Medical Association.....*By* **R. L. GORRELL**, *Buffalo, N.Y.*

Localization of Foreign Bodies .....*By* **L. G. COLE**, *White Plains, N.Y.*

Vaginal Antisepsis During Labor

No Infections in 13,000 Deliveries

By H. W. MAYES, M.D., F.A.C.S., *Brooklyn, New York*

PUERPURAL SEPSIS, still the leading cause of maternal deaths, is a preventable disease. Many hospitals have an enviable record as regards the small number of septic deaths reported annually, but this does not make up for the high mortality from this disease in other hospitals, and for those occurring in homes after delivery by physicians or midwives. The conditions under which they are delivered are often unfavorable and there is little or no precaution taken against the introduction of infection into the birth canal during pregnancy, labor or delivery.

The prejudice against the use of vaginal antisepsis has been most noticeable among those who should be its strongest advocates, namely, the authors of our text books and those who teach in our medical schools. In a recent canvass of the Diplomates of the American Board of Obstetrics and Gynecology it was found that 517 out 848 were using vaginal antiseptics, either routinely or occasionally, when delivering a patient. Of those who did not use vaginal antiseptics during labor there were only 52 who were opposed to their use. These men had had little or no experience with the procedure and so it would seem that we should take their objections rather lightly. Their excuses for not accepting the procedure were: (1) Their records were good enough without vaginal antiseptics; (2) instillations might do more harm than good; (3) it soiled the linen; (4) was too expensive; (5) vaginal bacteria should not be disturbed; (6) the upper part of the vagina was sterile.

These objections are easily outweighed by the reports of numerous pathogenic organisms reported found in the vagina of the woman in labor or at the time of delivery and by the fact that when the membranes are ruptured, most men, if not all, realize that the patients are infected even after a relatively short labor and invariably resort to a low flap or an extraperitoneal cesarean section if an operation is indicated, and then they pour powdered sulpha drugs into the peritoneal cavity.

At the Methodist Hospital, there have been two septic deaths in over 27,000 vaginal deliveries. These were not classified as dying from sepsis by the Department of Health at the time of their death as they both had a pelvic thrombophlebitis and one had a cerebral embolis. There have been no deaths from infection in the last 13,000 deliveries.

Technic

Vaginal antisepsis during labor was first begun at the Methodist Hospital, Brooklyn, *19 years ago* and has been continued without interruption since that time. A four per cent solution of mercurochrome was used until January 1st, 1942 and since that time we have been using a two per cent solution. This is much cheaper, cutting the price of the drug in half, and has worked equally well if not better. Many other antiseptics have been used and exceptionally good results have been reported. Some drugs are undoubtedly better than others but *just as important as the drug is the technic which is used.* The instillations must be started as soon as possible after the onset of labor and repeated every 12 hours until delivery. The aqueous solution should be instilled into the vagina and at the time of delivery the acetone solution should be used to spray or paint the perineum. We like the mercurochrome because it plates the tissues with an antiseptic solution which does not evaporate and if dried will readily go into solution again, if moisture is applied. This does not hold true for some solutions which are instantaneous in their action and are then inert. It is not sufficient to wait until the baby is about to be born and then attempt to sterilize the birth canal. This is impossible. A special asepto syringe* has been manufactured for the proper instillation of the vagina.

Results

The increased interest and improvement in the use of the technic of vaginal antisepsis during labor is shown by a survey of 41 hospitals in which 30 were using the technic. During the years (1939, 1940, 1941) there were 95,890 patients delivered following the use of vaginal antiseptics with only 12 deaths from puerpural sepsis. Of these deliver-

*Asepto syringes are manufactured by Becton Dickinson Co.

ies 52,746, mercurochrome was used either as routine or occasionally, with but 5 deaths from infection.

It would seem high time that we got away from "the horse and buggy" days of obstetrics and accepted a technic which makes puerpural infection one of the rare diseases in our maternity practice.

The following recent publications will give in detail what has been condensed here in a few paragraphs.

494 First St.

References

Western J. Surg., Obst., & Gynec., 50:11 pp. 568, Nov. 1942

Western J. Surg., Obst., & Gynec., 51: 5 pp. 201, May 1942

New York State J. of Med. 43:16. p. 1518, August 1943

Nutrition

Introductory Statement

By NATHAN SMITH DAVIS, III, M.D.,* F.A.C.P., *Chicago, Illinois*

ONLY A FEW YEARS ago, nutrition was considered adequate if a diet contained sufficient calories to prevent excessive weight loss. Then it was learned that it must contain enough protein to keep the body in nitrogenous equilibrium. Even before this, it had been learned that citrus fruits or tomatoes were essential for the prevention of scurvy and that codliver oil prevented rickets. Then came the knowledge that if a diet contained proportionately too much fat, acidosis developed and it was learned that beri beri and xerophthalmia were caused by dietary deficiencies. It was also learned that secondary anemia developed when the food lacked iron and goiter when it lacked iodine.

As advances in our knowledge of physiology, normal and abnormal, and physiological chemistry made possible the study of cellular chemistry and the isolation and identification of vitamins, hormones, enzymes and other essential compounds, it has become evident that a truly "adequate diet" is very different from what it had been believed to be. Dr. A. J. Carlson has defined an optimum diet as "that kind and quantity of food which permits and promotes optimum growth, optimum performance of all biological functions, optimum resistance to disease, optimum conservation of the factors of safety and powers of repair and optimum length of life with optimum efficiency within the framework of the hereditary potentialities of the individual and the species."[1] Such a diet must contain the minerals, amino acids, fatty acids and vitamins that are essential to the proper utilization by the cells of each and every tissue of the body, of the amounts of fat, protein and carbohydrate it contains. Certain of these essential elements can not be synthesized by man though some of them can be by other species of animals or by plants.

It has also been learned that the quantities of these essentials contained in animal and plant foods is dependent on the chemical composition of the soil on which they were raised and on the season of the year in which they were produced. Furthermore it has been learned that the dietary habits of the people have caused civilized man to discard or to remove by methods used in processing and destroy by methods used in processing and preserving, many of these essentials that were present in the foods before they were so treated.

Such advances in our knowledge of nutrition have made it apparent that while only about one-third of the population of the United States of America have been ill-housed and ill-clad even during the depths of the depression, at least three-fourths of our people are ill-fed. Though there has been little increase in the known deficiency diseases, there is no question about the prevalence of "hidden hunger" even among the more prosperous portions of the population. The prevention of malnutrition now appears to be of more importance than anything else, if our standards of health are to be raised. Any amount of medical service, no matter how it is provided, can not accomplish this as long as an appreciable proportion of the population is ill-fed, ill-housed or ill-clad.

In occasional articles to appear subsequently, an effort will be made to outline the role of some of these essentials in cellular metabolism and to indicate the foods in which they are most abundant and the most economical and effective methods for including them in the regular diet. In this series of articles,

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attention will also be given to the subclinical syndromes which may or have been proven to be due to minimal and relative dietary deficiencies, and to the possible role of malnutrition in the etiology of certain of the degenerative diseases of advancing years.

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Bibliography

1. Carlson, A. J., "Some Obstacles in the Path Towards an Optimum Diet." *Science*, 97:385 (April 30) 1943.

Relaxation Therapy for Asthmatics

By FREDERICA SCHMITZ SVEVO* *Welfare Island, New York, N. Y.*

RELAXATION therapy in asthma brings about the tearing down of hyperfunctions of the breathing muscles, and of muscles involved in the production of voice and speech, with the consequent building up of a properly controlled function of the muscles involved.

Briefly summarized, the steps in the treatment of asthmatic patients are the following:

1. Put the patient on a flat stretcher or bed, with a small cushion under his head.

2. Tell him to relax. After some time, relaxation of the surface skeletal muscles sets in. This relaxation can only be a partial one, at first. At the beginning of the relaxation exercises, the patient will experience the sensation of calming down, of a warm and weighty feeling in the arms and legs, while in other parts of the body, such as the abdomen, chest, and head there will still be signs of tenseness and spasticity. These tensions may be overcome by letting the patient sigh. Sighing promotes correct and easy exhalation.

3. Special attention should be given to exhalation because asthmatics have a craving for air; that is why they force inhalation. Sighing is ideal exhalation with the voice gliding down a sequence of tones. Sighing is easily performed. The therapist has to show this exercise to his patient several times so that he may grasp the idea clearly.

4. In order to free the patient from his phobia of insufficient inhalation, explanations should be repeated for assurance and emphasis. Specifically, what has been wrong in his attitude during an attack should be made clear to him: that he always inclines to inhale more air than he can hold, because his lungs contain too much air already and are therefore overexpanded and thus lack the elasticity essential to normal respiration. He should think of exhalation first; this is best accomplished through sighing. The first short and somewhat plaintive sighs will prove to him the correctness of the therapist's explanation. He will find relief in prolonging these sighs.

5. It should than be explained to him that he has to practice these exercises 15 to 20 times a day from 1 to 2 minutes not only reclining, but also in sitting and standing positions. He should never aggravate an approaching attack by reverting to his former habits, but should start his sighing exercises immediately. He should be made to realize through repeated explanation that *rational expiration leads to automatic inspiration*. Accompanying alternating relaxed forearm movements describing circles outward and downward will help to establish balanced, rhythmic relaxation patterns, as he repeats his exercises.

6. When the patient has become a trained "exhaler," the therapist can proceed with the second part of the treatment, i.e. the speech therapy based on the chewing method.

Describe to the patient the simple, natural process of eating. Then ask him to exhale with a sigh. Have him repeat it, this time chewing the breath, as though eating, during the sigh. This procedure of chewing movements, instantly permits an unimpeded stream of tone to flow. Even at this stage there is some resonance also. In order to get rid of all former hyperfunctions, the patient, for the time being, should not concern himself with exact articulation. He should try simple words, numbers, or short sentences as exercises and practice them 15 to 20 times a day for about 1 to 2 minutes.

The "chewing method" was originated by Froeschels. This method is a rational one which does not have to be acquired by a patient through drill; it needs only to be understood to be put into practice.

*Voice and Speech Therapist of the Department of Oto-Rhino-Laryngology, City Hospital

The therapist merely demonstrates that it is indeed possible to speak and eat at the same time because eating and speaking have many movements and adjustments in common.

This conception, embracing two seemingly different functions of the body (which are, as far as the mouth movements are concerned, identical) suffices in most cases to do away with waste of breath and all kinds of hyperfunction.

We must not underrate the importance of the psychological factor in asthma. The therapist's approach must include that, and relaxation, of course, is a fundamental of such treatment.

It is understood that the entire treatment outlined in this summary must be administered in an individual and flexible manner.

54 East 79th Street

Postpartum Sterilizations

Patients who have had an uncomplicated labor and spontaneous delivery may be sterilized at the earliest convenient time. However, if there is some question that the patient may be contaminated, through prolonged rupture of the membranes, operative delivery, or many rectal examinations, the procedure is delayed until the fifth postpartum day. The patient's postpartum course is observed, and if no elevation of temperature or pulse has occurred by the fifth postpartum day, the procedure is then carried out. Patients who have large varicosities are carefully followed before tubal ligation, since this condition predisposes to thrombophlebitis in patients in general.

Method

The Pomeroy-Lull method of tubal ligation is used. The patients are given preoperative sedation with a dose which varies, depending upon their size; the average patient is given a sixth to a fourth of a grain of morphine, 1/100 to 1/150 of a grain of hyoscine 45 minutes before operation. Thirty minutes before operation, three grains of "Seconal" is also given. The patient's abdomen is prepared and the abdominal wall infiltrated with 1 per cent procaine solution. Three drops of epinephrine are added to each ounce of procaine. Care is taken to infiltrate the tissue deep into the anterior rectus sheath in order to block the segmental nerves. The incision, approximately 1½ inches in length, is made just below the upper margin of the fundus of the uterus. When the abdomen is open, the pelvic viscera are not disturbed. The abdominal wound is retracted laterally to expose the fallopian tubes Occasionally, it is necessary to gently pull the uterus in the opposite direction with the gloved fingers. The tube is picked up with Babcock clamps, and 1 to 2 cc of 1 per cent procaine is injected into the wall of the tube. The fimbriated extremity is then identified. The mid portion of the tube is lifted with a Babcock clamp, forming a loop which is crushed and tied with chromic catgut. Care is taken not to ligate the larger vessels of the mesosalpinx, since their ligation may interfere with ovarian circulation. The loop of the tube is then excised, and the ligature is cut after it is certain that hemostasis has been secured. The segment of tube removed is examined grossly for positive identification, before the abdomen is closed. All segments are subjected to histopathologic examination, and the reports filed with the patient's hospital record. The same procedure is carried out on the opposite side. The abdomen is closed in anatomical layers, using continuous O chromic catgut sutures. A few interrupted sutures complete the skin approximation.

In our hands, local infiltration has been the anesthesia of choice. The patient returns to the room, moves freely about in the bed, experiences little or no postoperative reaction, and is permitted a full diet at once. Since there is little or no operative shock and no reaction to the anesthesia, we feel a reduction in the morbidity and the incidence of postoperative complications results. Venous stasis and the likelihood of thrombophlebitis is probably reduced.

—A. Lock, M.D., in *South Med. J.*, Feb., 1943.

MICHAEL SERVETUS

Editorial

Michael Servetus

Martyr of Science

WE speak with reverence of this generation's martyrs to science—of the men who have given up their lives that the truth might be known. And we do well. But what must have been the fiber of the courage which prompted men to proclaim the facts as they saw them, when disagreement with the ecclesiastical authorities might (and often did) bring them to the torture chamber and the stake?

Early in the sixteenth century (in 1509 or 1511—authorities differ) Miguel Serveto (his name was later Latinized to Michael Servetus) was born in the Spanish town of Tudela, in Navarre. With this event a great and fearless mind entered a world, darkened by largely voluntary ignorance and torn by bloodthirsty fanaticism.

Servetus was one of the greatest scholars of his age. Whatever he touched—and he dealt with many matters—seemed to glow with the ardor of his individuality. When he edited the geographic writings of Ptolemy, he violated the traditions by mixing the maps with observations on botany, zoology and astronomy, with all of which subjects he was thoroughly familiar, and making that dry subject almost interesting.

In the dawn of medical history the physicians were also priests. If a list could be made of all the disciples of Hippocrates who have been deeply interested and active in religion since those early days, it would be a surprise to many. The name of Servetus would be prominent in that list. He had views regarding the nature of the Trinity which, when published, necessitated his hurried flight from Spain, to escape the Inquisition.

In those days Lyons was one of the world's intellectual centers, and Servetus was drawn there as iron to a magnet. He supported himself by editing various scientific books for a firm of publishers. There he formed friendships with the keen and thoughtful physicians, Camphier and Rabelais (the latter is now a world figure for other than medical reasons) and decided to study Medicine.

In 1536 he entered the University of Paris as a medical student where, among his teachers, he found Sylvius and the intensely interesting "learned beggar," Guinterius, who had, among his other pupils, none other than Andreas Vesalius.

Servetus was graduated, with high honors, in 1538, and became a lecturer at the University, where his wide culture and scholarly attainments attracted the attention of the Archbishop of Vienna, who chose the young physician as his confidential medical advisor.

But the lively and original mind was not content to accept the dogmatic statements of Galen (the "Pope of Medicine") and other authorities, and original thinking was dangerous in those days. Servetus continued to investigate, to think and to *write*—which latter activity was his undoing. His treatise on syrups, published in 1537, was the first rational attempt to avoid incompatibilities and to disguise nauseous doses in pleasant-tasting vehicles; but it criticized some of the ideas of Galen and stirred up such a furore (people took books very seriously in the sixteenth century!) that the author was almost impeached by the Faculty of Paris.

At last after much study and thought, Servetus produced a work which he called "The Restoration of Christianity," in which he propounded the "horrible" doctrines that unbaptized infants were not loathsome to God (wherefore he is known as an Anabaptist); that the Church and the State should be entirely separate institutions; that every man should be free to think as he pleased on religious matters; and that the blood did not ooze through the interventricular sputum, as taught by Galen, but passed from the right to the left ventricle

through the lungs, where it absorbed the "vital spirit" and became red—*the first description of the pulmonary circulation*, anticipating Harvey by more than fifty years!

But these heresies could not go unchallenged, and brought him into collision with the cold-blooded protestant bigot, Calvin, who was, if possible, more relentless than the Romish fanatics. After a long trial, during which passages from his book were read as evidence against him, Servetus was condemned to death by fire and, on October 27, 1553 he was chained to a stake, with his book by his side, and cremated alive. The copies of his great work were so thoroughly destroyed that only two are now known to exist, in the libraries of Paris and Vienna. Harvey never had an opportunity to know the work of his precursor.

So passed in the prime of his life, one of the original geniuses of the Medical profession, of whom Victor Robinson has said: Servetus was the greatest man of his age. His brain was a torch that burned to enlighten the world. He was the irritant that caused the sixteenth century to turn uneasy in its sleep. It could not rest till he was off the earth.

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Not until man understands his own reason for being here can we have peace.
—MANLY P. HALL

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Christmas People

IT is easier to say than to feel a "Merry Christmas" and the question has been asked, "How can we be honestly joyous this Christmas?" It is asked by the men at the front and families at home, who have lost loved ones. It has even been suggested that it is no longer intelligent to celebrate the Christmas principle "Peace on earth and Good Will to all men," as it is an impossible ideal, a dream that has so obviously failed.

Should we submit to the influence that would black-out the Christmas spirit? Such an attitude would grant a victory to the forces of evil. Christmas this year is a symbol of defence, a citadel to be garrisoned for it opposes something that is hurting mankind.

Now, that is a challenge to anyone who sits wondering how to keep Christmas Day, in the present state of things, for true gayety and festivity will be difficult, but do not too readily assume that a gloomy mood is a sign of sympathy with the world's sorrows; more likely it's a surrender to the forces that cause those sorrows. It is not necessary that we be all light and gladness, for Christmas stands for something more than merriment, but it is necessary to have faith in the ideal and to be loyal in our beliefs.

The Christmas principle has not failed—it is exacting a penalty for its violation. Its positive power is evident in the changing drift of world thought.

To celebrate Christmas as the anniversary of a past event is one thing; to observe it as the active prophecy of the future, is another. Taken as a prophecy it will give us a refreshed outlook, and a happy one.

Christmas People live for tomorrow. To them it celebrates something that is coming, a fulfillment of the prophecy of the ages, the incarnation of love and tranquility. Is this spirit in your heart? Then truly do we keep the Christmas and just as truly does Christmas keep you.

✦

Examine Today

J. H. IS DEAD. He was a quiet, non-complaining type. He first appeared several years ago for treatment of severe frontal headaches. The headaches were increased by bending forward and coughing, and were accompanied by a cold. The diagnosis of frontal sinusitis seemed obvious when a small amount of pus was obtained on suction, and he was partially relieved. Several following treatments did not give any marked relief and the note was made on the record that some other cause must be active. No further examination was made because many patients were being taken care of at the time.

When next heard from, he had been explored by a neurosurgeon who found an inoperable brain tumor. Because he had not been examined, he had wasted six months after his treatments, believing that he had sinusitis. Five minutes spent in looking at his retinae (or one minute in referring him for an examination) might have spared his life and certainly would have enabled him to avoid much pain.

P. B. is dead. He stopped in at his physician's office one day and inquired about a lump on the penis that he could feel through a long, tight prepuce. The physician had no instruments for doing minor surgery in the office and told him to come to the hospital the next morning for a circumcision and removal, or at least inspection, of the mass. The patient delayed for a time, because it was the busy season for farmers. He had already taken off one day for the long trip to town, and the doctor had not seemed concerned over the condition. Amputation of the penis for carcinoma was performed, too late.

When a patient is in the office for the *first* time, then is the golden opportunity present for examination and necessary treatment. He may never return; he may put off further investigation, especially if he feels no distress. He has come to you because he feels that he needs care. *Regardless of what he says, he would not be in your office if he was not concerned about himself.* Some strange phobia seems to prevent some persons from coming out and straightforwardly presenting their symptoms and worries. Such individuals appreciate a *thorough* examination, and so remark on its completion.

The young physician often feels that he wishes to save the patient expense and thus does not take x-rays or have laboratory work performed. Expense is a variable factor in this world of ours. A man will drive up in a car that cost over a thousand dollars and then demur about the expense of a ten dollar chest x-ray. The basic lack is, of course, education. He has been educated to demand certain things in cars. In medicine, he is still mentally back in the days when a visit to the doctor meant a taking of the pulse and temperature, and a stethoscopic examination of the chest. He does not realize the tremendous importance of finding a *small* area of infiltration in a lung. When he is told that neglect of minimal tuberculosis may result in the expenditure of hundreds of dollars, months of hospitalization and prolonged disability, the fee does not seem as high.

Incidentally, the thesis of immediate examination is furthered if the physician has many of the tools to work with. His syringes and needles should be sterilized and ready for tuberculin testing, brucellergin testing for undulant fever and other intradermal tests. If he has roentgen ray equipment, he will be able to get many more chest x-rays than if the patient is referred to a hospital elsewhere. (aside: Why don't physicians locate their offices, whenever practical, in a hospital, so that expensive duplication of equipment could be avoided, patient's and doctor's time would not be wasted in travel, and injured or ill patients could be seen at once?).

This theory *works*. A summary of general practice in a town of 2,600 reveals that 524 x-rays have been taken during a period of four years and three months. This refers to patients, not to individual films. Unfortunately, fluoroscopic examinations were not numbered so the number of screen examinations of the lungs and heart, fractures and so on, is not known. The town is a simple farm community without industrial organizations or wealthy clientele.

Many of these patients mentioned that they had never had such a thorough examination (history, physical examination, blood count, and urinalysis were considered the basis for every patient with any complaint of a general nature), and that they were glad to have had it. Only three patients complained seriously about the expense of the examination (a percentage of .005) and did not return. Many of the others have become staunch supporters; a few have even been converted to the idea of a yearly examination. Apropos the competition of clinics, it is noteworthy the number of these patients who say, "They couldn't find anything more wrong with me than you did," after a thorough checkup at the largest clinic in the world located only 3 hours drive away.

Examine them now; you will increase your percentage of diagnostic successes; you will satisfy and keep more patients; you will practice better medicine and think more to make early diagnoses, and in the process, your income will be enhanced.

✦

Nothing is more legitimate than Faith, although the truths that it proclaims are absolutely undemonstrable.—KANT.

THE SEMINAR

Problem No. 3, 1943 (Medical)

Presented by M. P. N., M.D.
Columbia, Mo.

(See Clin. Med., Sept. 1943, p. 247)

Recapitulation: A negro man, 61 years of age, was first seen in the outpatient clinic on September 6, 1940. The chief complaints were:—

1. "Misery" in the stomach
2. Swelling of ankles
3. Shortness of breath
4. A 15 pound weight loss

The "misery", edema, and dyspnea were noticed approximately one month prior to his first visit to the clinic. The "misery" was found to be a painful discomfort in the epigastrium, initiated by the ingestion of food, and lasted for approximately one hour after each meal. The ankle swelling had progressively increased. Dyspnea, amounting to orthopnea, was likewise progressive, with periods of greater severity that were referred to as "spells." Past history was essentially irrelevant.

Examination: He was dyspneic and this was markedly evidenced following even minor physical exertion. There was a husky voice with a nonproductive cough made worse by lying down. Crepitant rales were heard in both lung bases.

There was a strong radial pulse, a visible and palpable apex beat in the left 6th intercostal space 3 cm outside of the left midclavicular line, and at the apex there was a soft systolic murmur. The blood pressure was 128/100, and the pulse rate was 120 and rhythmic.

He responded fairly well to bed rest, phenobarbital and digitalis therapy for 4 weeks. Then the manifestations previously recorded became exaggerated. The cardiac sounds were very muffled and distant, but the radial pulse was strong. The apex impulse was neither visible nor palpable. The cardiac size had increased greatly.

Under hospital care and strict bed confinement, three days later the findings were not materially altered except that the cervical veins were now conspicuous, air hunger was great, tachycardia persisted, the intercostal spaces of left and right sides now showed some bulging, and there was a respiratory rate of 37. A gastric analysis revealed retention of food, anacidity, a few Boas-Oppler bacilli, and pus cells. The blood Kahn was negative. Total white blood cell count was 4,700; with 43% lymphocytes, 3% large mononuclears, and 54% polymorphonuclear neutrophils. The total red cell count was 3,750,000 and hemoglobin (Dare) 60%. Urinalysis revealed a 24 hour output of 560 cc., a marked amount of albumen, hyaline, epithelial, and granular casts, a rare blood and pus cell, and numbers of triple phosphate crystals.

The temperature was consistently between 98 and 100 degrees F. From the time first seen until death, a period of 40 days, the weight loss was 4 pounds.

He died on the 12th hospital day with dyspnea, orthopnea, edema, and mental confusion being very pronounced during the last 4 days.

Requirements: State your diagnosis of the cause of death, giving reasons.

What further examinations would *you* have made, if any?

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Discussions, none

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Solution

This case should have called for x-ray studies of heart, thorax, and stomach; aspiration of pleurae and certainly of the pericardium for diagnostic bacteriological and cytological examinations, as well as for therapeutic purposes; measurement of water intake and urine elimination as a kidney function test; and since apparatus was available, electrocardiographic study. Therapy, through removal of pleural and pericardial fluids, would have afforded much relief, but would not have resulted in cure. Sedatives and digitalis did not materially modify the decompensated heart, but if to these salyrgan had been added, renal elimination might have been increased and thereby some of the stored water removed from the tissues.

Diagnosis—(Partially established and partially confirmed by autopsy)

Tuberculous pericarditis, massive, with effusion; cardiac decompensation; anasarca (of cardiac and renal origin); passive hyperemia of liver and stomach, with the clinically termed gastro-hepatic syndrome of cardiac failure; hydrothorax, bilateral; compression pulmonary atelectasis; leucopenia, lymphocytosis, and anemia of tuberculosis; chronic parenchymatous nephritis, and terminal uremia.

CLINICAL NOTES and ABSTRACTS

Microfilm copies of any of the published papers here abstracted, up to 25 pages, may be obtained for 25 cents from Microfilm Service, Army Medical Library, Washington, D.C.

Chronic Prostatis in Older Men*

Etiology of Prostatis: (1) Foci of infection in colon, teeth and tonsils; (2) acute infections, such as influenza, severe bronchitis, pneumonia, or a prolonged systemic infection, (3) traumatism, either externally to the perineum and posterior urethra, or internally from instrumentation of the urethra; (4) sexual abuse or (5) urethral stricture. Certain vitamin deficiencies and endocrine dyscrasasis may be predisposing factors.

Routes of infection: (1) Direct extension of infection and the posterior urethra and bladder, (2) directly through the blood stream from infections elsewhere in the body or (3) by lymphatics which surround the gland.

Immediate cause: Colon group of bacilli and staphylococci are most common invaders; streptococci are less common.

Pathologic changes: Round cells infiltrate into the interstitial tissue. In mild infections, the glandular portions may be unaffected, while in the more marked infections, the acini may contain swollen, necrotic cells mixed with a few pus cells (polymorphonuclear leukocytes). Fibrous tissue appears as the process becomes older. The glands may appear compressed and atrophic or dilated because of duct obstruction. The ducts may also be compressed or the epithelium may be many layers thick, suggesting carcinoma.

Symptoms

Pain, local or referred, is a common complaint. Local discomfort is described as a "heavy" or "uneasy feeling" in the perineum and anal area. **Sacral backache** is common, described as a tired or weak feeling not relieved by rest, often most severe on arising in the morning and wearing off as the patient becomes active (as contrasted to arthritic pain which often becomes worse on exertion). The pain may be referred down the legs or into the groins, or may simulate renal or ureteral colic. *Because of its nerve supply, the prostate may produce pain at any level below the diaphragm.*

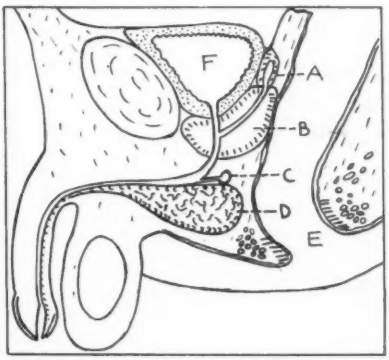

Fig. 1. Cross section of the male pelvis showing the relationship of the prostate gland (B) to the ampulla of the vas deferens (A), the rectum and anal canal (E), Cowper's glands (C) and the bladder (F). D indicates the bulbocavernosus muscle. (After a frozen section by Braune).

Bladder symptoms: Frequency, painful urination, urgency and difficulty in urination are all common complaints. They usually signify an associated invovement of the posterior urethra and bladder neck. This frequency of urination is most severe when the patient is up and about and is somewhat relieved by inactivity, in contrast to the frequency of bladder neck obstruction which is often more pronounced at night.

In marked infections, there may also be a *urethral discharge*, which may be profuse or merely a "morning drop."

*Penn. Med. J., June 1943

Sexual symptoms: Premature ejaculation, painful erection, perineal discomfort following ejaculation, loss of vigor to complete impotence and neurasthenia are complained of.

Malaise, easy fatigability, nervousness, sleeplessness, headaches and so on are often complained of.

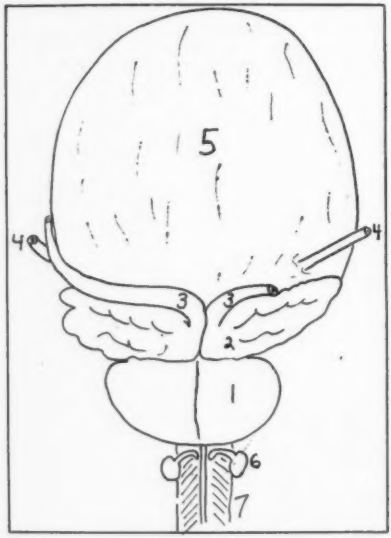

Fig. 2. The anatomy of the prostate (1), seminal vesicles (2), vas deferens (3), ureters (4) and bladder (5), as viewed from behind. These structures and Cowper's glands (6) and the membranous urethra (7) are encountered by the examining finger in the rectum. (From Huhner).

Diagnosis

Rectal palpation may show a boggy tender gland, a firm, "woodeny" gland, or an apparently normal one.

Fresh fluid expressed from the gland should be examined microscopically. The first specimen may appear normal. Later massages may produce secretions showing more than the normal 2 to 6 white blood cells per microscopic field. The amount of pus varies up to so much that the pus cells cannot be counted. As the infection increases, the number of granules or "lecithin" bodies decreases, another indication of the extent of prostatis.

Treatment

The treatment of chronic nonspecific prostatis is often long drawn out and requires the fullest cooperation of the patient.

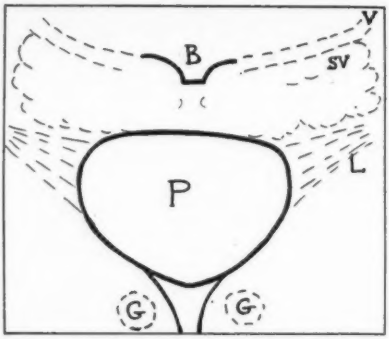

Fig. 3. A touch picture of the prostate and its adnexa as felt rectally. These structures outlined boldly can be felt normally. P represents the prostate, B the bladder base, V the vas deferens, SV the seminal vesicles, L the lymphatics and G. Cowper's glands. *These structures indicated by dotted lines can be felt only when diseased.* (After Sir John Thomson-Walker and Hamilton Bailey).

1. A well balanced diet containing a full amount of vitamins is prescribed. All seasonings are eliminated. Colon elimination is important. Adequate rest and exercise are important. Sufficient fluids must be taken.

2. Foci of infection in teeth and tonsils should be removed.

3. The posterior urethra should be dilated until a large sized sound (Fr. 24 to 28) can be passed readily.

4. Prostatic massage expresses the accumulated secretions, promotes better drainage, and increases local circulation. It should be gentle but firm and the entire gland should be gone over thoroughly so as to empty it as completely as possible. An attempt should be made to strip the seminal vesicle at the time of each massage. Massage is carried out every 4 to 7 days at first, depending upon the severity of the infection, with the treatments being placed farther apart as the condition improves.

5. As drainage improves, the inflammatory changes in the posterior urethra may become more marked. Warm irrigations of 1:6000 solution of potassium permanganate or the instillation of 5 percent mild silver protein solution into the posterior urethra should be done following massage.

6. Sulfonamides should be used to clear up pyuria and also for their effect on the gland itself.

7. Vesical irritation should be treated by:

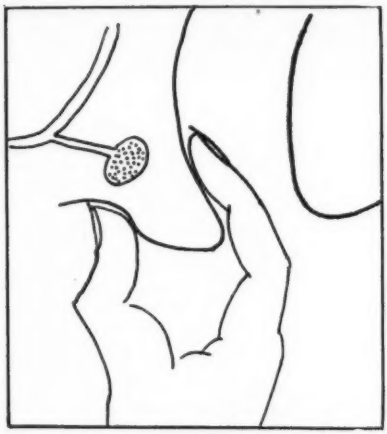

Fig. 4. Cowper's glands, if enlarged, can be felt by grasping between the index finger in the anus and the thumb pressing in on the perineum. (After Hamilton Bailey).

Rx

Sodium bromide	ounce 1
Potassium citrate	ounce 1
Tincture belladonna	ounce ½
Tincture hyoscyamus	ounce 1
Water q.s. ad	ounces 6

Sig.: Take one teaspoon three times daily.

7. **Heat** is of real value; it may be applied by hot sitz baths, hot rectal irrigations, diathermy, Elliot treatment or by electric prostatic heater.

8. Vaccines, serums, hyperpyrexia from injections of foreign proteins and injections into the prostate itself are of limited usefulness.

9. If medical therapy does not bring about prompt improvement in 4 to 6 weeks and the amount of residual urine does not decrease, thorough urologic study should be done to make sure that the bladder neck is not obstructed.

Danville, Pennsylvania.

WALTER I. BUCHERT, M.D.

✦

Hypertension or Albuminuria in Pregnancy

The discovery of hypertension or albuminuria with or without edema, in the first half of pregnancy, indicates that vascular or renal disease exists *independently* of pregnancy (hypertension uninfluenced by pregnancy).

Pre-eclampsia is signaled by the appearance of a rise in blood pressure or an increase of albuminuria during the *second* half of pregnancy, or a marked increase in body weight.

Treatment: Water must be eliminated by the body through these steps: 1. Diuretics. 2. Restriction of salt and soda bicarbonate. 3. Purges. 4. Use of a high protein, high carbohydrate diet.

Potassium chloride may be used in 2 gm. doses four times daily; ammonium chloride in 1 gm. doses six times daily or magnesium sulphate 8 gm. daily by mouth, are also effective diuretics. Sedation should be employed (preferably by injection of 10 cc. of 25 percent solution of magnesium sulphate intramuscularly or 0.2 gm. sodium amytal intramuscularly).

Evacuation of the uterus dramatically relieves eclampsia if carried out before irreversible changes have occurred. — LEWIS DEXTER, M.D. in *J.A.M.A.*, May 15, 1943.

✦

Low Fat Diet and Hypertension

Experimental evidence indicates that arteriosclerosis is due to the presence of excess cholesterol esters, which first appear in the intima of the arterial wall, following an over-indulgence in cholesterol*. The fat containing cells lodge in the arteries at points where there is an increase in trauma, such as an elevation of blood pressure, and calcification follows, resulting in arteriosclerosis.

Theory: The deposit of fatty acid crystals is the first step in arteriosclerosis (atherosclerosis).

Clinical application: A low fat and low cholesterol diet was advised for a series of patients with hypertension or arteriosclerosis.

The first case, which already had definite symptoms of partial occlusion of arterioles with atheromatous plaques, was a plethoric man of 45 years, weighing 220 pounds. Complaint: Sudden attacks of transient aphasia (inability to speak due to changes in the brain) and paresis (loss of function) of his whole right side.

He was placed on a low fat, low cholesterol diet. At the end of 6 weeks, he had changed from a greasy, fat, cyanotic, dull individual, to a clear skinned, pleasant and much lighter (30

*Cholesterol belongs to the sterol group; its chief sources are egg yolk, liver, kidney, brain, cream, butter and meat fat; it is widely distributed in most of the body cells, either as free cholesterol, or combined with fatty acids to form cholesterol esters; the normal blood level of cholesterol, which may be determined by a well equipped laboratory, is raised by the eating of the above foods. (Wright in "Applied Physiology.").

pounds) man. He had no further attacks of aphasia over a period of 2 years and says that he feels better than in the previous 25 years.

An over-fed, puffing, older patient was put on the diet because of hypertension (systolic pressure of 200), failing heart and edema. In three months, she lost 50 pounds, had no edema and her pressure was maintained at 160.—T. D. CUNNINGHAM, M.D., in *Rocky Mt. Med. J.*, May, 1943.

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Night Blindness

Night blindness may be indicated when the patient fails to see objects readily seen by others in the twilight and may stumble over or bump into them. Passing from bright illumination into dimly lighted buildings, such as theaters, he fails to see his surroundings for a long time. The condition is usually worse in the evening than in the early morning twilight. It may become manifest first after exposure to brilliant illumination. At night, the person is helpless in dazzling lights. It is obviously a serious condition in automobile drivers.

Night blindness is the failure of visual adaptation in dim light. It may be due to an organic lesion of the eye such as retinitis pigmentosa or to vitamin A deficiency. The diagnosis of serious night blindness in adults can be easily made from the history. The diagnosis in mild cases and in children over six can be made by suitable instruments. If organic disease of the eye can be excluded, if the history suggests deficient ingestion of vitamin A containing foods or deficient absorption, and *if the patient improves while under treatment with large doses of vitamin A in 3 to 5 days, the diagnosis of night blindness due to vitamin A deficiency is established.*

Treatment: Large doses of vitamin A must be given daily (100,000 International Units).—S. W. CLAUSEN, M.D., in *Med. Clin. N. Am.*, Mar. 1943.

◆

The Normal Appearing Gallbladder

To operate for cholecystitis, after careful study of the patient, only to be confronted by a soft, bluish gallbladder without adhesions, is one of life's most embarassing moments to the conscientious surgeon. Hopefully, and also woefully, he examines every other organ in the abdomen. Should he remove a normal appearing gallbladder or close the abdomen, only to have the patient complain of the same symptoms afterwards?

A series of patients have been followed for many years, from whom "normal" gall bladders were removed. 87 percent were relieved. It must be remembered that these patients were *studied very carefully* before surgery was carried out. Follow up has been carried out for many years, so these surprisingly good results have been verified.

Cattell writes, "If sufficient evidence existed to necessitate an operation, the gallbladder should be removed in the absence of other lesions to account for the symptoms." Graham has said, "I would rather trust the results of cholecystography than my senses of sight and touch at operation." Our experience agrees with both of these opinions. —J. R. VERBRYCKE, JR., M.D., in *Am. J. Dig. Dis.*, May 1943.

◆

Insulin and Carbohydrate in Infections

There is a decreased dextrose tolerance in acute infectious diseases. Practical application of this fact has been made by using small doses of insulin in such cases where the tolerance is impaired, to cover an adequate carbohydrate intake. This point was made in my original article but its practical significance was not emphasized.—J. LISLE WILLIAMS, M.D., 636 Church Street, Evanston, Illinois.

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Treatment of Persistent Hiccup

Gastric lavage should be tried first, for persistent hiccup. Atropine sulphate, gr. 1/150, by hypodermic injection, relieves certain patients. Hypnotics, such as amytal or luminal, often prove effective. If ineffective, the physician should order the witholding of all food by mouth, the intravenous injection of dextrose (glucose) solution and the subcutaneous injection of 1/150 gr. of scopolamine.—*E.E.N.T.M.*, Arp. 1943.

(A simple remedy is the breathing of carbon dioxide, which may be carried out by holding a paper bag tightly around the nose and mouth for several minutes, and letting the patient rebreathe his own carbon dioxide. It is a little more elegant, if a gas machine is available, to give CO_2 by mask. The slow intravenous injection of sodium pentothal, sufficient to produce sleep, is often effective.—ED.)

◆

Edema From Cold

The cooling of human hands and feet by immersion in water at 41° F. causes the extremities to swell. The swelling is

due mainly to an edema of the tissues, occurring in the skin and subcutaneous tissue, and may amount within 3 hours to as much as one-sixth of the original volume. Cold injures *directly the skin and subcutaneous tissue*. This effect begins at 60 to 64° F. and increases as the temperature of the water is cooled. Much protein is lost to the system, as the edema fluid is very high in protein content.—THOMAS LEWIS, M.D. in *Clinical Science*, Apr. 17, 1943.

(This study by Sir Thomas Lewis, England's most famous clinical physiologist, helps to understand "immersion foot," the sequel to floating on life rafts with feet constantly immersed in cold water. —ED.)

The Neurotic Individual

We cannot determine by any test the mental condition and possibilities of a neurotic patient. "Character and temperament," "integrity and sociability" elude our tests much more than "intelligence," which is difficult enough to measure. The selective Boards would probably have put Nelson (famed Admiral Nelson of the English Navy) in Grade IV. "His nervous system was always frightened but his awareness knew no fear."—LORD HORDER, M.D., in *Proc. Royal Soc. Med.*, May 19, 1943.

(Practically all men and women who have accomplished great things were considered "queer" or "neurotic" by their friends and associates. Just because a person does not act exactly like ourselves, we should not hurriedly classify him as abnormal. It takes someone out of the ordinary to accomplish extraordinary feats; little as we like Hitler, for example, and sure as the psychiatrists are that he is psychopathic, we must admit that he has changed the world's history.—Ed.)

The Dizzy Patient

True dizziness is a sensation of rotation of external objects around the patient. Objective vertigo is almost always labyrinthine (internal ear) in origin. Other causes of deafness found in the ear are wax in the external auditory canal and eustachian tube blockage following cold or other nose and throat infection. The eustachian tube may be opened by spraying the nose with ephedrine solution and politerizing (blowing air into the nose with one nostril closed and the patient swallowing).

Patients who have had a radical mastoid operation become dizzy when a cold wind or cold water makes contact with the mastoid area because the labyrinth wall is widely exposed. If such persons go swimming without adequate protection, the result may be disastrous.

Head injuries are frequently followed by dizziness which may be prolonged. The cause often cannot be found. Often, it is not a true vertigo with rotation, but rather a feeling of unsteadiness and insecurity. Unlike labyrinthine vertigo it may persist for months or years. The dizziness of high blood pressure causes the same type of unsteadiness.

A hypersensitive carotid sinus is often overlooked as a cause of dizzy spells. The attacks in this condition can be relieved by belladonna or excision of the carotid body.

Anxiety states may produce the same felling of insecurity and "swimmy" head that head injuries do.—M. ATKINSON, M.D. in *E. E. N. T. M.*, Feb. 1943.

A Simple Stand for Office or Hospital Use

This type of stand may be used in the office for the purpose of holding irrigation or enema cans (barium enemata, colonic irrigations, wound irrigations). In the hospital, it has been employed to support Wangensteen continuous suction intestinal tube apparatus and flasks for intravenous therapy, as shown in Fig. 1.

It may be easily constructed, in suitable dimensions, at any machine shop. (See Fig. 1, Inset) A square or rectangular block, of steel is drilled so as to accommodate the vertical rod, of one-half inch diameter, and a hand screw is fitted for tightening the rod in place. Bolt holes are drilled and the entire block is bolted to the frame of the bed. Clamps may also be used for fastening to the bed frame.

As illustrated, two lengths of rod may be used. The long one is handier for intestinal suction, as the amount of suction obtained increases with the height of the water bottle, and also for hypodermoclysis. The short rod gives ample height for intravenous injections and blood transfusions.

These rods have a cross piece with double hook so that two objects may be hung independently from each stand. They are stored conveniently without taking up an appreciable amount of

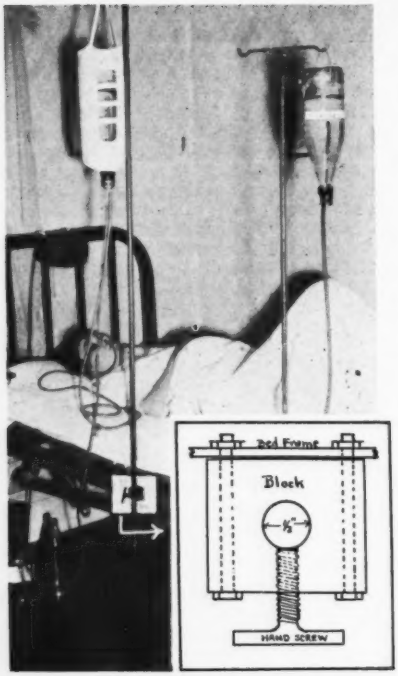

Fig. 1. Two stands are shown. Inset shows construction of block and hand screw.

space; they are light, easy to carry and cannot be tripped over. There is no danger of the stand being knocked over.

The same blocks may be used to support short rods on which knee crutches may be used, as on the ordinary examining table, thus making a delivery bed out of an ordinary hospital bed. *The patient need not be moved to the delivery room*, as forceps can be applied readily and suturing done with the patient lying cross-bed, with hips over the side of the bed and legs supported by knee stirrups. W. G. McMillin—Clarion, Iowa

✦

Collodion-Picric Acid for Burns

For superficial burns, the use of ¼ or ½ percent of picric acid in flexible collodion relieves pain at once, dries rapidly, can be applied quickly and smoothly with an ordinary cotton tipped applicator, resists dampness or rubbing of clothes, may be bathed with soap and water, affords a complete view of the healing process, is inexpensive and can be made up by any pharmacist. No dressing is needed. The medication should be applied immediately to the burned surface, so that blistering will not result. Any preliminary cleansing —can be done with ether.—W. A. Guild, M.D. in *J. Am. Ins. Homeo.*, Dec. 1942.

✦

Iodine in General Treatment

Iodine is a "food." In extremely small doses, it is potent in ensuring the efficient function of the endocrine system in general and thus preventing "imbalance" with its glandular effects.

Iodine is essential to health, and indeed to life. The minute intake required should be continuous (as in iodized salt. —Ed.) as the storage capacity of the thyroid gland is limited.

1. It is beneficial to general health.
2. It normalizes natural resistance to acute and chronic infections.
3. It delays the onset of cardiovascular degenerations and retards their progress.
4. It exerts a preventive influence in many cases of bronchial asthma.
5. It is of value in the prevention and treatment of goitrous conditions.
6. It is a systemic antiseptic.
7. It should be given to pregnant women, and before and following surgical procedures.—W. M. Stevens, M.D. in *Med. World (Lond.)*, July 14, 1943.

✦

A High Protein Beverage

A high protein liquid food (formula below) may be used in diseases of the liver, kidney, stomach and intestine, and during long convalescence from illness, gastrointestinal surgery, prolonged infections and burns. These conditions result in a decreased amount of protein in the blood serum. Solid food often cannot be taken and the intravenous injection of proteins, amino acids, or blood may not be practicable over long periods. It may be used in the treatment of peptic ulcer.

Milk	2 cups
Egg whites (frozen)	1¼ cups
Dryco	1⅞ cups

Preparation: The milk powder is mixed gradually with frozen egg white, which has been beaten until foamy (but not dry) with an egg beater, and then with the milk, while the mixing process is continued. Filtration through one thickness of gauze will remove the egg membrane.

Such a mixture can be fortified with

vitamin concentrates or cream if added calories are desired. The day's supply is prepared in the morning and kept cool in the refrigerator. When served, each glass can be sweetened with sugar and flavored with vanilla, chocolate, malt extract, coffee or molasses. — L. BAUMAN, M.D. in *J.A.M.A.*, Apr. 17, 1943.

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Sources of Vitamin A

Green plants, many yellow vegetables and fruits and some grains contain carotinoid pigments which are the precursors of vitamin A. Such foods should not be stewed for many hours in open vessels, but may be cooked in closed containers.

Vegetable Source	Amount	International Units
Greens	3½ oz.	10,000
Carrots	3½ oz.	10,000
Squash (Hubbard)	3½ oz.	6,000
Green beans	3½ oz.	2,000
Tomato juice	4 oz.	1,400
Oleomargarine with vitamin A added	1 oz.	560
Animal Sources	**Amount**	**International Units**
Liver	4 oz.	7,000
Butter (summer)	1 oz.	1,800
Butter (winter)	1 oz.	900
Milk (summer)	1 pint	950
Milk (winter)	1 pint	550

Pharmaceutic Sources

Burbot Liver Oil contains at least 4,480 U.S.P. units per Gm.
Shark Liver Oil contains at least 16,500 U.S.P. units per Gm.
Halibut Liver Oil contains at least 50,000 U.S.P. units per Gm.
Percomorph Oil contains at least 60,000 U.S.P. units per Gm.

The more potent fish liver oils contain 1 Gm. in 50 drops. Carotene in oil is available in solution furnishing 7,500 units of vitamin A per GM.—S. W. CLAUSEN, M.D. in *Med. Clin. N. Am.* Mar. 1943.

◆

Water and Health

The dietetic error that has killed more patients than any other is the neglect of administering enough water. In acute disease, a highly colored urine is a reproach to the physician and nurse; a dehydrated skin and tongue are danger signals. Few persons who deal with the functions of the living body, whether in health or disease, realize that water constitutes more than 70 percent of protoplasm, the structural basis of organic life. In health, water is not merely incidental in this connection, it is the medium in which the chemical changes of metabolism occur. As water is continually lost to the body through various paths, by way of kidneys, bowel, lungs and skin, it is obvious that the output must be adequately replaced if a healthy balance is to be maintained.—*J.A.M.A.*, Nov. 17, 1942.

◆

Tuberculosis Axioms

The older the individual, the greater is the tendency for pulmonary tuberculous lesions to heal.—The longer a patient has had a tubercle, the less likely will living tubercle bacilli be found. —Most tubercles heal gradually, beginning within a few months after their formation and continuing up to about 10 years, the result depending upon treatment, resistance, and so on. — H. C. SWEANEY, M.D. in *Miss. Vall. Med. J.*, April 1943.

(This pathologic study indicates that 7 percent of children from one to ten years have calcified lesions; that 55 percent of those from 10 to 20 years, 80 percent of adults in the third decade and 100 percent of persons 70 years old, will have similar lesions. This finding underscores the relative unimportance of calcified lesions found on the chest film. The persistence of living bacteria for at least 10 years in tuberculous lesions indicates the importance of yearly chest films for at least that length of time. —ED.)

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Ultraviolet Irradiation for Children

Ultraviolet rays are of value in preventing and treating rickets in infants and children, and the vitamin D deficiency type of osteoporosis in older children and adults.

Many pediatricians and physical therapeautists feel that ultraviolet irradiation is of value in bringing about recovery from subacute, pyogenic infections and nutritional anemia, and that slow or stationary weight gain is speeded up.

Ultraviolet irradiation among children grouped together in homes, hospitals or school rooms sterilizes the air and tends to reduce the spread of certain infectious diseases.—*J.A.M.A.*, June 5, 1943.

THUMBNAIL THERAPEUTICS

Urethral Discharge in Infants

• Discharge from the penis in male infants is frequently due to a narrowed urethral meatus. Crusting over the meatus often appears. The urethral opening may appear of normal caliber from the outside. The stenosis produces retention of secretions which is followed by local non-specific urethritis with secondary crust formation and obstruction to urination. *Treatment:* Meatotomy, with or without local anesthesia, followed by local use of antiseptics. Urinary antiseptics by mouth may be needed.—*J. A. M. A.*, June 5, 1943.

Treatment of "Electric Flash" Inflamed Eyes

• The exposure of the eye to flashes of electricity or to the reflection of the sun on snow causes "electric ophthalmia," or "snow blindness." The eye becomes reddened, the lids swell, lacrimation appears and light becomes painful to the eye. *Treatment:* A local anesthetic (Pontocaine or cocaine) is dropped in the eye several times, the patient is placed in a chair facing an infra-red lamp and his eyes are treated with infra-red rays for 20 minutes (at a distance of 30 inches). The patient is told to look steadily at the lamp, with the eyes open. The pain is relieved quickly.—W. P. BLANTON, M.D. in *E.E.N.T.M.*, May 1943.

Sulfonamide Dangers in Pregnancy

• It has been shown that the sulfonamides pass through the placenta to the fetus. Cases of acute yellow atrophy of the liver and acute hemolytic anemia in newborn infants have been reported following the administration of sulfonamides to their mothers. Such medications should only be used for serious conditions during the course of pregnancy.—*Med. World (Lond.)*, Jan. 20, 1943.

Cerumen (Wax in Ear)

• Cerumen is found in a large percentage of persons who are entirely unaware of its presence. A large draft board in Kentucky reports in the *Kentucky Medical Journal* for May, 1943, that one man is kept busy irrigating the ears of registrants.

The physician who routinely looks in everyone's ears will help his patients and his practice.

Treatment of Rosacea

• Internal therapy is not needed for rosacea. Darier's paste has been very effective:

Resorcin	0.75
Sulfur precip.	2.20
Zinc oxide	
Starch aa	6.00
Lanolin	
Petrolatum aa	7.50

For the recalcitrant cases that do not respond to this, a *very* strong application is made up of Betanapthol 2.0, Sublimed Sulphur 4.0, Balsam of Peru 15.0, Lanolin and Petrolatum to make 30.0.—T. S. SAUNDERS, in *Northw. Med.*, May 1943.

Thyroid Therapy in Gynecology

• Thyroid therapy is of value in many gynecologic conditions (menopause, senile pruritis and vulvovaginitis, amenorrhea, primary dysmenorrhea and menorrhagia). *Dose:* One-half grain daily, increased by one-half grain every 10 days until the desired effect is obtained or intolerance is noted. If the patient is intolerant of small doses, 10 to 15 drops of Lugol's solution (Compound Solution of Iodine) or saturated solution of potassium iodide given concurrently with the thyroid, helps offset the side effects. — A. R. ABARBANEL, M.D. in *J.A.M.A.*, April 3, 1943.

Estrogens for Acne

• The oral use of estrogens markedly benefits the woman with acne. Stilbestrol or natural estrogens may be employed. (0.1 to 0.2 mg. stilberstrol, daily.)—C. H. LAWRENCE, M.D. in *Endoc.*, June 1942.

DIAGNOSTIC POINTERS

"Latent" Syphilis

• There is no such thing as latent syphilis. There is (1) active and (2) inactive. Inactive or subclinical syphilis is the cause of many late, disastrous complications (syphilitic heart disease, tabes, cerebral syphilis).—A. GELPERIN, M.D.

Itching of the Eye

• Itching and lacrimation of the eye is a symptom of allergic conjunctivitis. The eyes are red and itchy; the thin, watery discharge shows many eosinophils. *Cause:* orris root (found in most cosmetics), dust or animal danders. —LEO H. CRIEP, M.D. in *Penn. Med. J.*, May 1943.

Chronic Illness in the Child

• The child who is not well, who runs a slight fever, may have rheumatic infection or tuberculosis. One must not wait for signs of rheumatic heart disease before insituting rest in bed, any more than one waits for tubercle bacilli before diagnosing tuberculosis.—R. A. BLACK, M.D. in *Miss. Vall. Med. J.*, Apr. 1943.

Watery Nasal Discharge

• A thin, watery nasal discharge is a common symptom of allergic rhinitis. Many eosinophils are found on microscopic examination of the discharge. *Cause:* pollen, dust, orris root (found in many cosmetics) and other inhalants. —LEO H. CRIEP, M.D. in *Penn. Med. J.*, May 1943.

"Heart Failure" Caused by Thiamin Deficiency

• Heart failure which does not respond to digitalis and diuretics may be the first symptom of thiamine (vitamin B_1) deficiency or wet beriberi.—J. F. NASH, M.D. in *South Med. & Surg.*, Mar. 1943.

Errors in Tuberculosis Diagnosis

• The finding of acid-fast bacilli in gastric contents is not a reliable sign unless culture or guinea pig inoculation is carried out. The report of atypical tubercle bacilli in the sputum is also unreliable without confirmation. — E. T. BELL, M.D., in *Radiol.*, June 1943.

Urticaria and Dental Infections

• Severe hives (urticaria) may be due to infected teeth or gums.—W. M. HULL, M.D. in *Bull Balyeat Clinic*, May 1943.

Diagnosis of Gonorrhea in Women

• Only one female gonorrheal patient in five is clinically positive, although all are culturally positive, if *repeated* examinations are made.—H. STRAUSS, M.D., in *J.A.M.A.*, Apr. 10, 1943.

Chronic Cough in Children

• The occurrence of a chronic cough in children may be the first symptom of an allergic tendency. Asthma may appear later. Such children should be skin tested for sensitivity to foods and pollen.— F. HANSEL, M.D., in *Laryngoscope*, May 1943.

(This author has also written, "Chronic allergic cough in the absence of definite nasal symptoms or asthma may be diagnosed on examination of the cells of the nasal drainage. Predominating eosinophiles indicate that an allergic cause is at work. Eosinophilia disappears durin an acute cold or infection.—ED.

Proctoscopy Preparation

• The rectum may be cleaned for proctoscopic examination by instilling a few ounces of 50 per cent solution of hydrogen peroxide and then sucking it out through a catheter.—H. G. HUMMELL, M.D., in *South. Med. J.*, Aug. 1943.

Bronchial Carcinoma Symptoms

• The symptoms (cough, expectoration, weakness, loss of weight, and fever) which bring the patient with carcinoma of the lung to the physician, are often due to infection and retained secretions. They may improve as the result of medical therapy, thus often inducing the physician to change the original diagnosis and permitting the patient no chance of cure by surgical removal.—LEO G. RIGLER, M.D., in *Radiol.*, June 1943.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

No matter what his rank or position may be, the lover of books is the richest and the happiest of the children of God.—LANGFORD

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ILLUSTRATIONS OF SURGICAL TREATMENT

Farquharson

ILLUSTRATIONS OF SURGICAL TREATMENT, Instruments and Appliances. *By Eric L. Farquharson, M.D., F.R.C.S.E., Major R.A.M.C., Formerly Clinical Tutor and Temporary Assistant Surgeon, Royal Infirmary of Edinburgh. Second Edition. A William Wood Book; Baltimore: The Williams and Wilkins Company. 1942. Price, $7.00.*

This small volume contains many ingenious methods of managing fractures and dislocations, fully illustrated by clinical photographs. Also illustrated are several hundred surgical instruments, running the gamut from esophageal bougies to cystoscopes.

Many of the technics illustrated, such as that of suturing the tip of the fifth finger to the palm of the hand, as a method of treating phalangeal fracture, are of practical value.

The text would be much improved by the elimination of obsolete instruments, such as the coin catcher, a deadly and outmoded instrument. Nailing of the fractured femoral head is dismissed very briefly and Whitman's method, productive of morbidity because of prolonged immobilization, is still advocated. No mention is made of the injection of novocaine solution in the treatment of ankle sprains.

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METHODS FOR DIAGNOSTIC BACTERIOLOGY

Schaub and Foley

METHODS FOR DIAGNOSTIC BACTERIOLOGY. *By Isabelle G. Schaub, A.B., Instructor in Bacteriology, Department of Pathology, Johns Hopkins University School of Medicine: In Charge of the Diagnostic Bacteriological Laboratory for the Woman's Clinic, etc. and M. Kathleen Foley, A.B., Bacteriologist in Charge of Diagnostic Bacteriological Laboratory of the Medical Clinic, The Johns Hopkins Hospital, Baltimore. Second Edition. St. Louis: The C. V. Mosby Co. 1943. Price, $3.50.*

In brief, compact form, the authors have assembled the technics required for determining a bacteriologic diagnosis. They are in daily use at the Johns Hopkins Hospital and can thus be considered established procedures.

Clinical wisdom is injected wherever the value of laboratory procedures takes second place to clinical judgment.

Every other page is left blank for notes so that new procedures can be added or the student and physician can make additions.

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THE ANATOMY OF THE NERVOUS SYSTEM

Ransom

THE ANATOMY OF THE NERVOUS SYSTEM, From the Standpoint of Development and Function. *By Stephen Walter Ransom, M.D., Ph.D, Formerly Professor of Neurology and Director of the Neurological Institute, Northwestern University Medical School, Chicago. 408 illustrations; some in color. Seventh Edition, revised. Philadelphia and London: W. B. Saunders Company. 1943. Price, $6.50.*

The passing of Dr. Ransom deprived medicine and his chosen field of a brilliant student and master teacher. His book will serve as an enduring epitaph.

In the seventh edition, he has rewritten the chapter on the sympathetic nervous system, added more discussion concerning neurophysiology, and rewritten the section on the dorsal thalamus. He has added nothing to the material on the extrapyramidal motor paths because, "Very little is known on this subject and some ideas which have been generally accepted are certainly fallacious."

The text is a little long, but a definite attempt has been made to keep it from becoming massive or complex.

The book has always been a favorite because it does not present anatomy from the structural standpoint but rather from the functional standpoint. The new illustrations are well done.

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OUTLINE OF ROENTGEN DIAGNOSIS

Rigler

OUTLINE OF ROENTGEN DIAGNOSIS: An Orientation in the Basic Principles of Diagnosis by the Roentgen Method. *By Leo G. Rigler, B.S., M.B., M.D., Professor of Radiology, University of Minnesota, Minneapolis, Minnesota. 254 illustrations. Second Edition. Philadelphia, London, Montreal: J. B. Lippincott Company. 1943. Price, $6.50.*

When this outline was published several years ago, it was thought to be the best available. This opinion is reinforced by the second edition, which contains such additions as body section roentgenography, roentgenkymography, myelography for intervertebral disc herniation and so on.

Although designed for teaching medical students the fundamentals of x-ray diagnosis, this manual serves the physician and surgeon who have their own roentgen ray outfits or who would like to know the essentials of information to be learned from x-ray study.

A pictorial atlas occupies the second section of the book. 227 clear x-ray reproductions and sketches showing bony disease and injuries are presented.

The material is full of pointers on making a diagnosis. It is so compact and well organized that one can turn to any section of the body and quickly learn what the normal x-ray appearance is and what is typical of various diseases.

AUTONOMIC REGULATIONS

Gellhorn

AUTONOMIC REGULATIONS: Their significance for Physiology, Psychology and Neuropsychiatry. *By Ernst Gellhorn, M.D., Ph.D., Professor of Physiology, College of Medicine, University of Illinois. New York: Interscience Publishers, 1943. Price, $5.50.*

The author discusses the body as one organism with the autonomic system as a coordinator and regulator between the various systems. He has brought together, in one book, many original observations gleaned from his own research on various aspects of autonomic activity plus brief summaries of other work in the field.

That such study is without clinical application, is the first impression, but many of the topics discussed contain material which, if mastered, would permit more logical diagnosis of altered physiological processes, and proper treatment. The chapter on adjustment to hemorrhage concerns a topic of vital interest to every surgeon and most physicians.

After a brief survey of the anatomy and physiology of the sympathetic and parasympathetic systems, the author discusses adjustment reactions to carbon dioxide, anoxia, asphyxia, hypolgycemia and hemorrhage. The interrelation of the autonomic and endocrine systems constitutes the third section. Part four presents the integration of the autonomic and somatic. Results and application are discussed and summarized in the last section, including adjustment reactions in general and spinal anesthesia.

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PHYSIOLOGICAL REGULATIONS

Adolph

PHYSIOLOGICAL REGULATIONS: *By Edward F. Adolph, M.D., Associate Professor of Physiology in the University of Rochester, Rochester, New York: The Jacques Cattell Press, 1943. Price, $7.50.*

"Physiological Regulations" is a descriptive and quantitative study of the balances and adjustments by which the internal medium is stabilized. It is a synthesis combining the author's own notable contributions to the subject with data collected by many others. More than half of this book with 502 pages deals with water exchange between body and external environment, over a range of species from man to the Arbacia egg. Similar though less extensive figures are presented on the exchanges of other components, among them heat, oxygen and glucose. Particular attention is given to the time course of recovery from varying degrees of excess or of deficit ("positive or negative loads"). Such adjustments, translated into mathematical graphs, are found to conform to certain patterns.

One sentence of Claude Bernard's is familiar to every physiologist. "All the vital mechanisms, varied as they are, have only one object, that of preserving constant the conditions of life in the internal environment." If this reader has understood correctly Dr. Adolph's point of view, it is that "vital mechanisms" and their "objects" are abstractions that may or may not have meaning; all we know is that the stability of the internal environment is maintained by certain processes, operating in characteristic patterns which only the method of quantitative description can show. Whether one agrees with this philosophy or not, Dr. Adolph's arguments for it are vigorous and interesting.

Since the material is presented largely in the form of mathematical symbols and graphs, its comprehension will require some familiarity with that language. Even the non-mathematical portions of the text will be rather slow going for the reader whose technical vocabulary is scanty. Readers having no such limitations, and who are seriously interested in human and comparative physiology, will find the book informative and stimulating.—T.E.B.

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THE SIGHT SAVER

Gerling

THE SIGHT SAVER: *By C. J. Gerling: Harvest House, New York. 1943. Price $2.00.*

Everything that the layman should know in regard to his eyes (their care and protection) is presented here in encyclopedic form. Quacks, who advocate useless eyedrops or "exercises for the eyes," are exposed. For those who are interested, the material is put in brief paragraphs, or sections, listed alphabetically so that one may look for "Sight Without Glasses" under S, "Cross Eyes" under C and so on.

In straightforward language, that any person can understand, practical advice is given on the care of emergencies involving the eye. Suggestions are made as to seeking proper professional attention when glasses are needed, and the facts concerning the eye diseases which fill the average person with dread, are clearly brought out. The patient is encouraged by being told that many eye lesions, formerly resulting in blindness, can now be stopped or cured, if competent help is secured in time.

This is a good book to have in the waiting room for patients to pick up and read for a minute or two. One would wish that more books for the laity were as well written.

✦

WAR INJURIES OF THE CHEST

Davies

WAR INJURIES OF THE CHEST. *Edited by H. Morriston Davies, M.Ch., F.R.C.S. and Robert Coope, M.D., Edinburgh: E. & S. Livingstone, 16 Teviot Place. Imported by the Peter Reilly Co., Philadelphia. 1942.*

Nine workers in the field of thoracic surgery (surgeons, internists with special interest in thoracic disease, anesthetists) have composed a very small handbook on chest injuries as they may be encountered under war conditions.

After preliminary discussions of the anatomy and physiology of the heart and lungs, and pathological consideration, general clinical material is presented. Shock is briefly, but ably, discussed. Chest injuries without external wounds, hemothorax, infected hemthorax, penetrating and open chest wounds, anesthesia and after care of patients with chest injuries, make up the topics covered.

This handbook fills the gap between articles in the literature and the large works on chest surgery. It is especially interesting to the man who needs to improvise under the trying conditions of surgery far removed from a well equipped operating room, as methods of making a pressure anesthetic machine out of the ordinary gas mask and an inner tube, of using local anesthesia for chest operations, and other simple technics are given.

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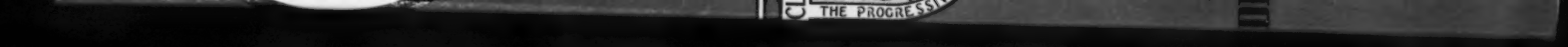
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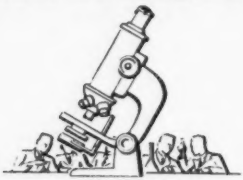

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